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BEFORE THE ARIZONA CORPORATION COMMISSION

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BOB STUMP  
Chairman  
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Commissioner  
BOB BURNS  
Commissioner  
SUSAN BITTER SMITH  
Commissioner

Arizona Corporation Commission

DOCKETED

DEC 31 2014

DOCKETED BY

IN THE MATTER OF THE APPLICATION )  
OF TUCSON ELECTRIC POWER )  
COMPANY FOR APPROVAL OF ITS 2014 )  
AND 2015 ENERGY EFFICIENCY )  
IMPLEMENTATION PLAN AND FOR )  
WAIVER UNDER A.A.C. R14-2-2419. )

DOCKET NO. E-01933A-13-0183

DECISION NO. 74885

ORDER

Open Meeting  
December 18, 2014  
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Tucson Electric Power Company ("TEP" or "the Company") is engaged in providing electric power within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.

Background

2. On July 3, 2013, TEP filed an application for approval of its 2014 Energy Efficiency Implementation Plan ("Plan") and for a waiver of the Energy Efficiency ("EE") Standard under A.A.C. R14-2-2419. The Plan proposes new measures and programs and the discontinuance of some measures, discussed further herein. The Plan also includes a notification that the Residential and Small Commercial Demand Response Program would be removed from TEP's portfolio following the pilot program. In addition, the Plan proposes to make other modifications, such as moving or revising program components.

1           3. 2015 Plan. On June 2, 2014, TEP filed a notice in this Docket that the 2014 Energy  
2 Efficiency Plan filed on June 3, 2013, “should also be considered the 2015 Implementation Plan.” No  
3 changes to the budget or programs were proposed. The notice also included information regarding  
4 the impact on compliance with the EE Standard of the exemption requested by Freeport McMoRan.

5           4. Freeport McMoRan Exemption. On March 17, 2014, Freeport-McMoRan Copper & Gold,  
6 Inc. (“Freeport”) filed an application requesting exemption from TEP’s Demand-side Management  
7 Surcharge. The impact of the requested exemption on TEP compliance and on customer bills is  
8 discussed further herein.

9           5. Demand-side Management (“DSM”) Surcharge Reset. TEP noted that it is not requesting a  
10 reset of the existing DSM Surcharge as a part of this Plan. Although a reset is not required at this  
11 time, Staff believes that the DSM Surcharge should be reset to reflect the requested budget, the  
12 significantly decreased under-collection, and the potential Freeport exemption. The DSM Surcharge  
13 reset is discussed further herein.

14           6. Rate Case Decision Regarding Status Quo. In the most recent TEP rate case (Decision No.  
15 73912, June 27, 2013), the Commission ordered that the Company maintain the status quo with  
16 respect to its EE programs. The Decision stated the following:

17  
18                   “Regardless of the mechanism for recovering approved EE/DSM Program costs, we  
19 find that only the proposed EE/DSM Programs and budgets adopted in the  
20 Settlement Agreement, and which have already been approved by the Commission in  
21 previous decisions, should be approved.”

22           However, we believe TEP customers should have access to EE/DSM Programs and  
23 measures found cost effective by Staff for TEP and that the Commission has previously approved for  
24 other utility customers.

25           7. Rate Case Decision Regarding Budget. Decision No. 73912 also approved a budget of \$21  
26 million. This budget was based on the one proposed in Exhibit TEP-11 from the rate case, but  
27 modified to reflect the Decision’s order (cited above) to maintain the status quo with respect to  
28 programs.

28 ...

1 Appendices

2 8. Existing and proposed programs will be discussed herein. Three Appendices are attached  
3 that provide data on the individual measures.

4 ...

- 5 • Appendix 1-A, Cost-effectiveness. Appendix 1-A lists the existing programs and  
6 measures alphabetically, along with the updated Staff benefit-cost ratio, and the  
7 total incentive amount associated with that measure. (Cost-effectiveness was  
8 recalculated for all measures)
- 9 • Appendix 1-B, Cost-effectiveness. Appendix 1-B lists the proposed programs and  
10 measures alphabetically, along with the Staff benefit-cost ratio, and the total  
11 incentive amount associated with that measure.
- 12 • Appendix 2, Measure Detail Description. Appendix 2 lists the existing and proposed  
13 programs, the associated measures (also alphabetically) and provides a description  
14 of the individual measures.
- 15 • Appendix 3, Approving Decisions and Benefit-Cost Ratios, Existing Measures. Appendix 3  
16 lists the Decisions in which existing measures were approved, along with the  
17 benefit-cost ratios from those Decisions.

18 Programs Discontinued or No Longer Proposed

19 9. Residential Financing. TEP is no longer proposing a Residential Financing Program. To be  
20 cost-effective, the Program would have to be offered in all of UniSource's territories. Since the  
21 Program was discontinued by UNS Electric (Decision No. 74599, July 30, 2014), and not approved  
22 for UNS Gas (Decision No. 73939, June 27, 2013), TEP chose to remove it from its 2014 list of  
23 programs.

24 10. Residential and Small Commercial Demand Control pilots. The Residential Demand Control  
25 Pilot Program was discontinued, as was the Small Commercial Demand Control pilot, although  
26 commercial customers with 100 kW or more of demand are eligible to participate in the Commercial  
27 Demand Control Program. (100 kW or more of demand is required in order to be cost-effective.)  
28 TEP states in its application that it:

1 “has decided not to offer a mass market Direct Load Control (“DLC”) program and is  
2 not requesting any budget approval in this EE Plan. TEP does not need this  
3 technology at this time to ensure safe and reliable service, and its contribution to the  
4 EE Standard is better met through TEP’s Commercial & Industrial (“C&I”) DLC  
5 program.”

6 11. Home Energy Reports. In addition, the Home Energy Reports Pilot Program was put on  
7 hold. TEP states in its progress report for 2013 that although cost-effective for TEP, it was not cost-  
8 effective, or approved, for UNS Electric. TEP notes that the Program could not utilize economies of  
9 scale and that customers complained that the reports were being delivered on an unsolicited, or opt-  
10 out, basis. Customers also questioned the accuracy of the reports. TEP proposes to maintain funding  
11 because it is planning to find another delivery model that will provide higher savings and better  
12 consumer satisfaction.

13 12. Discontinued Measures. Additionally, in its Plan, and following an update of avoided costs,  
14 TEP found a small number of proposed and existing measures to be non-cost-effective and is no  
15 longer offering them. Staff has also recommended that these measures not be included in the  
16 Company’s EE portfolio. These include the following:

- 17 • Behavioral Comprehensive Program—In Home Display Pilot (Proposed)
- 18 • C&I Comprehensive—LED Pedestrian Signals (Proposed)
- 19 • C&I Comprehensive—LED Street Parking Lights (Existing)
- 20 • C&I Comprehensive—Bi-Level Lighting (Proposed)
- 21 • C&I Comprehensive—Night Covers (Existing)
- 22 • C&I Comprehensive—T8 to T8 (Existing)
- 23 • Small Business Direct Install and C&I Comprehensive—Night Covers (Existing)
- 24 • Small Business Direct Install and C&I Comprehensive—T8 to T8 (Existing)

25 13. TEP has withdrawn its request (shown in Table 3.3 of the Plan) to suspend the following  
26 measures. TEP now considers these measures cost effective. (The below measures were broken out  
27 into six related measures. Those offering at least 50% reduction in leakage passed Staff’s cost-  
28 effectiveness review, while those offering at least 14% did not achieve a benefit-cost ratio of 1.0.)

- Existing Homes and Audit Direct Install--ROB\_HVAC with QI and Duct  
Sealing\_Electric (Performance)

- Existing Homes and Audit Direct Install--ROB\_HVAC with QI and Duct Sealing\_Dual Fuel (Performance)

### Proposed Budget

14. The budget proposed by TEP is shown below. It has been revised since the June 3, 2013 filing to reflect removal of the Residential Financing program, actual program activity levels, and the proposed combination of the previously separate Small Business Direct Install and School Facilities into a single program. (School Facilities was originally proposed as a separate program.) At \$18.8 million it is below the budget level set within the rate case.

TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET

Program	Status	Incentive	Delivery	Marketing	Administra- tion	Measure- ment	Total
<b>Residential Sector</b>		\$5,676,726	\$1,259,950	\$458,525	\$224,313	\$217,735	\$7,837,249
Efficient Products	Existing	\$1,832,659	\$415,813	\$143,390	\$90,303	\$65,754	\$2,547,919
Appliance Recycling	Proposed	\$90,000	\$174,535	\$143,293	\$26,215	\$29,846	\$463,889
Residential New Construction	Existing	\$1,050,000	\$57,000	\$75,000	\$61,575	\$52,628	\$1,296,203
Existing Homes	Existing	\$2,300,000	\$594,527	\$68,451	\$23,971	\$47,003	\$3,033,952
Shade Trees	Existing	\$150,500	\$0	\$4,919	\$6,849	\$2,364	\$164,632
Low-income Weatherization	Existing	\$232,800	\$6,500	\$15,591	\$11,678	\$16,526	\$283,095
Multi-family	Proposed	\$20,767	\$11,575	\$7,881	\$3,722	\$3,614	\$47,559
<b>Commercial Sector</b>		\$3,550,674	\$2,031,018	\$505,361	\$332,014	\$216,787	\$6,635,854
C&I Comprehensive	Existing	\$1,856,108	\$860,523	\$203,428	\$160,141	\$93,286	\$3,173,486
Commercial New Construction	Existing	\$217,200	\$82,443	\$34,220	\$15,509	\$11,293	\$360,665
Bid for Efficiency Pilot	Proposed	\$60,000	\$74,052	\$15,502	\$8,901	\$7,503	\$165,958
Retro-commissioning	Proposed	\$88,000	\$27,500	\$6,423	\$5,633	\$5,935	\$133,491
Small Business Direct Install & School Facilities	SBDI Existing//S F Proposed	\$1,329,366	\$984,000	\$245,788	\$141,742	\$98,770	\$2,799,666
CHP Program	Proposed	\$0	\$2,500	\$0	\$88	\$0	\$2,588
Behavioral		\$235,800	\$428,318	\$75,000	\$42,531	\$84,934	\$866,583

1	<b>Sector</b>							
2	<b>Behavioral Comprehensive</b>	Proposed, with existing components	\$235,800	\$196,000	\$75,000	\$30,042	\$32,033	\$568,875
3	<b>Home Energy Reports</b>	Existing	\$0	\$232,318	\$0	\$12,489	\$52,901	\$297,708
4	<b>Support Sector</b>		\$0	\$977,886	\$485,000	\$36,209	\$52,901	\$1,551,996
5	<b>Consumer Education and Outreach</b>	Existing	\$0	\$98,000	\$485,000	\$23,720	\$0	\$606,720
6	<b>Energy Codes and Standards</b>	Proposed	\$0	\$104,886	\$0	\$12,489	\$52,901	\$170,276
7	<b>Program Development, Analysis and Reporting</b>	Existing	\$0	\$775,000	\$0	\$0	\$0	\$775,000
8								
9	<b>Utility Improvement Sector</b>		\$0	\$388,482	\$0	\$16,850	\$22,768	\$428,100
10								
11	<b>Conservation Voltage Reduction</b>	Proposed	\$0	\$363,482	\$0	\$15,746	\$20,168	\$399,396
12	<b>Generation Improvement and Facilities Upgrade</b>	Proposed	\$0	\$25,000	\$0	\$1,104	\$2,600	\$28,704
13								
14	<b>Demand Response Sector</b>		\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
15								
16	<b>C&amp;I Direct Load Control</b>	Existing	\$0	\$1,420,000	\$0	\$59,979	\$40,000	\$1,519,979
17	<b>Total</b>		\$9,463,200	\$6,505,654	\$1,523,886	\$711,896	\$635,125	\$18,839,760
18	<b>Total Percentage of Budget</b>		50.2%	34.5%	8.1%	3.8%	3.4%	100.0%

### Overall Recommendations

15. During the June 11, 2013 Open Meeting, the Commission directed that a generic Docket (Docket No. E-00000XX-13-0214) be opened to address DSM and EE. The Commission indicated a desire to review the effectiveness of existing DSM and energy efficiency programs and measures before approving new ones and only approved recently-filed DSM/EE Plans for certain utilities as they related to the plans' "status quo" (i.e. new programs and/or modifications and/or enhancements to existing programs were not approved). It is reasonable to maintain the status quo for the TEP 2014 and 2015 Energy Efficiency Plan, with the exception that measures which are no longer cost-effective should be removed from the portfolio and that the overall budget can be adjusted to reflect

1 these removals. However, we believe TEP customers should have access to EE/DSM Programs and  
 2 measures found cost effective by Staff for TEP and that the Commission has previously approved for  
 3 other utility customers.

4 16. Staff has recommended that TEP maintain its budget at the requested \$18.8 million.  
 5 Staff has recommended that TEP have the flexibility to move funding between cost-effective  
 6 programs and measures, with the exception of the Low-income Weatherization Program, as long as  
 7 funding is restricted to cost-effective programs and measures and is divided as evenly as reasonably  
 8 possible between Residential and Non-residential customers.

9 **Programs**

10 17. The portfolio summary, below, lists and describes all the Programs, and describes  
 11 proposed changes to existing programs.

12 PROGRAM DESCRIPTION – TABLE 2 (Residential)

RESIDENTIAL SECTOR			
Program Name	Existing or proposed	Summary Description	Summary of Proposed Changes
Appliance Recycling	New (Proposed)	Removes and recycles inefficient refrigerators and freezers.	New program.
Multi-Family	New (Proposed)	Promotes direct install of energy efficient measures at apartment complexes consisting of five or more units.	New program.
Efficient Products	Existing	Program currently promotes CFLs. The Company has proposed including Residential LEDs, advanced power strips, and energy efficient pool pumps and timers and energy-	Request to add new measures.

1			efficient appliances.	
2	Low Income Weatherization	Existing	Assists in making low-income homes more energy efficient.	Increase for eligibility to 200% of Federal Poverty Level ("FPL").
3				
4	Residential New Construction	Existing	Promotes the building of more efficient new homes.	Notification that baseline EE standards/costs updated to reflect 2012 IECC. Tier 2 and 3 Homes eliminated.
5				
6				
7				
8	Existing Homes and Audit Direct Install	Existing	Promotes energy efficiency in existing homes.	Notification that Audits and HVAC improvement delivery have been redesigned to make them more cost-effective.
9				
10				
11				
12	Shade Tree	Existing	Promotes planting of desert-adapted shade trees in locations designed to enhance energy efficiency.	Notification that savings and incremental cost have been updated. No other modifications.
13				
14				
15				

PROGRAM DESCRIPTION – TABLE 3 (Commercial)

17	<b>COMMERCIAL SECTOR</b>			
18				
19	<b>Program Name</b>	<b>New (Proposed) or Existing</b>	<b>Summary Description</b>	<b>Summary of Proposed Changes</b>
20	Bid for Efficiency – Pilot	New (Proposed)	Customers or project sponsors develop a holistic EE project then bid competitively for incentives within broad program guidelines.	New program.
21				
22				
23				
24				
25	Retro-Commissioning	New (Proposed)	Promotes using a systematic approach in existing buildings to identify building equipment or processes that are not achieving	New program.
26				
27				
28				



1			optimal performance or results in an existing facility.	
2				
3				
4				
5	CHP Program – Pilot	New (Proposed)	Promotes combined heat and power plants in existing facilities to reduce electric consumption.	New program.
6				
7				
8				
9	Small Business Direct Install and Schools Facilities	Existing/New (Proposed)	Promotes installation of EE equipment at commercial customer's facilities and at schools by reducing out-of-pocket costs. Encourages customers to promote the Program by paying contractors the incentives.	Request to add new measures.
10				
11				
12				
13				
14				
15				
16				
17	C&I Comprehensive	Existing	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to provide turn-key installation services to business customers.	Request to add new measures.
18				
19				
20				
21				
22				
23	Commercial New Construction	Existing	A re-branding of the Efficient Commercial Building Design Program intended to assist customers in designing and constructing energy efficient buildings.	No modifications.
24				
25				
26				
27				
28				

PROGRAM DESCRIPTION – TABLE 4 (Behavioral)

Behavioral Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Behavioral Comprehensive	K-12 and community education measures are existing. Other components are proposed (new).	A variety of educational/behavioral programs, including direct canvassing, K-12 education, community education, senior education, and CFL giveaway outreach events.	K-12 and community education measures are existing and are being moved into the larger Behavioral Comprehensive program
Home Energy Reports	Existing	Energy reports comparing a customer's usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive Program.	On hold. Cost-effective, but TEP is revising the Program to make it more user-friendly and more cost-effective.

PROGRAM DESCRIPTION – TABLE 5 (Support)

Support Sector			
Program Name	New (Proposed) or Existing	Summary Description	Summary of Proposed Changes
Energy Codes Enhancement Program	New (Proposed)	Seeks to improve the level of compliance with existing local building energy codes and supports the periodic updating of these codes.	Request approval to count savings resulting from changes in appliance standards and to count 100% of the energy savings resulting from changes in EE building codes and appliance standards.
Consumer Education and Outreach	Existing	Marketing designed to increase participation in the TEP Implementation Plan and promote changes in behavior that improve energy	No modifications, except for K-12 and community education measures being moved into Behavioral Comprehensive.

1		efficiency.	
2	Program Development, Analysis and Reporting Software	Existing	New measure or program design and analysis, and developmental and maintenance of EE savings tracking software.
3			No modifications.
4			
5			

## PROGRAM DESCRIPTION – TABLE 6 (Utility Improvements Sector)

7	Support Sector		
8	Program Name	New (Proposed) or Existing	Summary Description
9			Summary of Proposed Changes
10	Conservation Voltage Reduction	New (Proposed)	Pilot program. Seeks to reduce energy consumption in distribution systems by maximizing the VAR with computerized control.
11			New pilot program.
12			
13			
14	Generation Improvement and Facilities Upgrade	New (Proposed)	Seeks to reduce energy consumption in power plants and utility facilities by installing EE pumps, motors, HVAC, lighting and improvements to increase heat rate in generation.
15			New program.
16			
17			
18			
19			
20			

## PROGRAM DESCRIPTION – TABLE 7 (Demand Response)

22	Support Sector		
23	Program Name	New (Proposed) or Existing	Summary Description
24			Summary of Proposed Changes
25	C&I Demand Response	Existing	A third party implementation contractor negotiates load reduction agreements with multiple customers to provide TEP
26			No modifications.
27			
28			

1			with a guaranteed load reduction upon request.	
2				

### 3 **RESIDENTIAL PROGRAMS**

4 18. Proposed and existing measures and their cost-effectiveness are discussed in each of the  
5 sections devoted to particular programs, with ranges provided for programs with a large number of  
6 measures. Please see Appendix A-1 and Appendix A-2 for lists of individual measures and their  
7 benefit-cost ratios.

#### 8 **Efficient Products**

9 19. Program Description. This is an existing Residential Program (currently its CFL  
10 Buy Down Program) previously approved by the Commission in Decision No. 70383 (June 13, 2010).  
11 New measures, include energy efficient appliances, pool equipment and lighting.

12 20. CFLs. In communication with Staff, the Company indicated that inefficient bulbs still  
13 dominate sales and continue to occupy the majority of the shelf space at retailers in TEP's territory.  
14 TEP projects that sales of inefficient bulbs would increase to 68% from 18% if the utility's rebates  
15 program was not in place.

16 21. Program Objectives and Rationale. The Efficient Products Program promotes the purchase of  
17 energy-efficient retail products through a combination of buy-downs and possibly on-line or mail-in  
18 rebates with participating retailers. The additional measures would provide Residential customers with  
19 more opportunities to install energy-efficient measures.

20 22. Proposed Changes. In addition to the existing CFL measure, new measures are proposed for  
21 the Efficient Products Program. The proposed measures and associated incentives are listed in  
22 Appendix A-2.

23 23. Eligibility. All Residential utility customers within TEP's service territory are eligible to  
24 participate.

25 24. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
26 the sector, projected costs per category, and total budget for each program.

27 ...

28 ...

1           25. Delivery and Marketing. Delivery will consist of a combination of buy-downs and possibly  
2 on-line or mail-in rebates with participating retailers.

3           26. Cost-effectiveness. Staff's analysis indicated that the existing CFL measure has a benefit-cost  
4 ratio of 4.82. Most of the proposed measures listed in Appendix A-2 are cost-effective with benefit-  
5 cost ratios in a range from 1.03 to 3.23. One proposed measure, the Residential Heat Pump Water  
6 Heater, is not cost-effective, with a benefit-cost ratio of 0.87.

7           27. Staff Recommendations. Staff has recommended that the existing cost-effective measure  
8 (CFLs) remain in place. Staff does not recommend approval of the Residential Heat Pump Water  
9 Heater measure. With respect to the proposed cost-effective new measures, Staff does not  
10 recommend approval at this time because of the Commission's desire to preserve the status quo while  
11 it evaluates the effectiveness of existing programs and measures. However, we believe TEP customers  
12 should have access to EE measures found cost effective by Staff for TEP and that the Commission  
13 has previously approved for other utility customers. We recommend approval of the EE measures  
14 found cost effective by Staff for TEP and that the Commission has previously approved for other  
15 utility customers.

#### 16 Appliance Recycling

17           28. Program Description. TEP's proposed Appliance Recycling Program is designed to remove  
18 and recycle inefficient working refrigerators and freezers. TEP cites national studies finding that  
19 approximately 20% of customers have at least one secondary inefficient refrigerator or freezer at  
20 home. The Appliance Recycling Program would offer residential customers a \$30 incentive for  
21 working refrigerators or freezers between 10 and 30 cubic feet, plus free pick-up and recycling.

22           29. In its application, TEP originally proposed an incentive of \$50, because of non-  
23 participation in the appliance program in UNS Electric territory. The Company is now proposing a  
24 \$30 incentive, because it believes that a lower incentive might be adequate given the marketing  
25 characteristics of TEP's territory.

26           30. Program Objective and Rationale. Second refrigerators and freezers are usually older and less  
27 efficient models. The Appliance Recycling Program would remove such inefficient appliances and  
28 recycle them, thereby permanently removing them from the grid.

1           31. Eligibility and Processing. TEP states that:

- 2                   • Participants must own the unit(s) being recycled;
- 3                   • Participants must be customers of TEP;
- 4                   • Units must be emptied prior to pick up;
- 5                   • Units must be between 10 and 30 cubic feet in size, utilizing inside measurements;
- 6                   • Pick-up must be scheduled through program partner JAC Environmental;
- 7                   • All units must be in working condition;
- 8                   • The refrigerator or freezer must be plugged in and operating or the crew will refuse
- 9                   the unit;
- 10                  • Once the unit is confirmed to be in working condition and to meet all other
- 11                   eligibility requirements, the crews disable it so that it cannot be placed back on the
- 12                   grid. The unit is then loaded and sent to the recycling center for total de-
- 13                   manufacturing and recycling.
- 14                  • Non-residential customers with working refrigerators and freezers meeting the
- 15                   Program size requirements would also be eligible to participate. The Program
- 16                   would limit customers of either class to no more than two appliances per year.

17           32. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists

18 the sector, projected costs per category, and total budget for each program.

19           33. Delivery and Marketing Strategy. A third party Implementation Contractor ("IC") will verify

20 eligibility, schedule pick-ups from customers, delivery to recycling centers and process incentives. The

21 IC is also responsible for marketing the Program.

22           34. Cost-Effectiveness. Based on Staff's analysis, the refrigerator and freezers measures have a

23 cost-effectiveness ratio of 2.27.

24           35. Staff Recommendations. With respect to the proposed new Appliance Recycling Program,

25 Staff does not recommend approval at this time because of the Commission's desire to preserve the

26 status quo while it evaluates the effectiveness of existing programs and measures. However, we

27 believe TEP customers should have access to EE programs found cost effective by Staff for TEP and

28 that the Commission has previously approved for other utility customers. We recommend approval of

1 this program, which Staff found cost effective for TEP and that the Commission has previously  
2 approved for other utility customers.

3 **Residential New Construction**

4 36. *Program Description.* The Residential New Construction Program is an existing program  
5 that offers incentives to homebuilders to build more energy-efficient homes (April 14, 2010, Decision  
6 No. 71638.) The Program provides training in advanced building-science concepts and promotes  
7 energy-efficient construction, as well as promoting the installation of high efficiency heating/cooling  
8 systems, lighting and appliances. It also assists sales agents in promoting and selling energy-efficient  
9 homes. The Program offers both all-electric and dual-fuel homes.

10 37. To qualify for an incentive, each home must be tested by an approved energy rater and  
11 meet criteria based on a Home Energy Rating System (“HERS”).

12 38. *Changes: Elimination of Tier 2 and 3 Homes.* Tier 2 and 3 homes were not proposed as part  
13 of TEP’s 2014 and 2015 Plan. Tier 2 and 3 were approved by Decision No. 71638 (April 14, 2013),  
14 although not found cost-effective without carbon savings and not recommended by Staff. TEP has  
15 now permanently eliminated the Tier 2 and Tier 3 measures because they are no longer cost-effective  
16 or because Commission Staff has recommended against their approval.

17 39. *Changes:* International Energy Conservation Code (“IECC”) 2012 Building Code. Five  
18 jurisdictions in Pima County<sup>1</sup> adopted the IECC 2012 Building Code beginning in 2013, meaning that  
19 compliant homes had to achieve a HERS score of approximately 72 or less. (Under HERS scoring,  
20 the lower the number, the more energy efficient the home.) In response to this change in the baseline,  
21 participating Residential New Construction homes are now required to achieve a HERS score of 65 or  
22 better. A HERS score of 100 represents the energy efficiency of a standard new home.

23 40. *Other Changes.* No new measures were proposed for this program.

24 41. *Program Objectives and Rationale.* The objectives of the Residential New Construction  
25 Program include reducing the peak demand and overall energy consumption of new homes. The  
26

27 \_\_\_\_\_

28 <sup>1</sup> Pima County, City of Tucson, Town of Sahuarita, Town of Marana, and Town of Oro Valley. TEP also provides  
service in Cochise County, but its only customer is Fort Huachuca.

1 Program also seeks to increase homebuyer awareness of the benefits of living in energy-efficient  
2 homes.

3 42. Eligibility. Builders must be licensed, bonded and insured within Arizona. Builders must  
4 also be constructing new residential single family homes, townhomes, duplexes, or triplexes, and agree  
5 to the Energy Star participation agreement and TEP's participation requirements.

6 43. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
7 the sector, projected costs per category, and total budget for each program.

8 44. Delivery and Marketing. TEP oversees management of the Program and its marketing, and  
9 is responsible for recruiting, training, and mentoring builders and sub-contractors. TEP also provides  
10 data tracking, rebate processing and technical support.

11 45. Cost-effectiveness. All-electric homes constructed in accordance with the New Construction  
12 Program's standards have a benefit-cost ratio of approximately 1.61. Dual-fuel homes constructed in  
13 accordance with New Construction Program's standards have a benefit-cost ratio of approximately  
14 2.26.

15 46. Staff Recommendations. This program is existing and cost-effective. Staff has recommended  
16 that it be approved to continue until further action of the Commission.

### 17 Existing Homes and Audit Direct Install

18 47. Program Description. The TEP Existing Homes and Audit Direct Install Program was  
19 approved by the Commission in Decision No. 72028 (December 10, 2010). The Existing Homes  
20 Program provides customer incentives for the installation of new high efficiency air conditioner, heat  
21 pump and duct system sealing. Air conditioners and heat pumps must meet efficiency standards and  
22 be installed following prescriptive quality installation standards that include the testing of charge and  
23 airflow. Pre- and post-installation testing results are used to verify project energy savings. Duct  
24 system sealing also requires pre- and post-project testing to document the exact quantity of system  
25 leakage sealed.

26 48. Home Audit Component. In order to maximize cost-effectiveness the home audit  
27 component of this program was redesigned into a workshop format. Participants learn how to use an  
28 available web portal that delivers an individual home energy assessment and provides customized



1 energy efficiency recommendations including information about other EE programs and rebates  
2 available from TEP. Finally, participants receive a direct install energy kit including six CFLs, and  
3 learn how to identify and complete simple do-it-yourself energy saving projects and behavioral  
4 changes.

5 49. Program Objectives and Rationale. The Program's objective is to achieve energy and demand  
6 savings from the installation of EE measures. The Program additionally focuses on best building and  
7 science principles in an effort to refocus the building industry on EE practices.

8 50. Changes. The original in-home audits by HVAC contractors were discontinued in 2014  
9 due to low cost-effectiveness. TEP has redesigned the in-home audits to make them more cost-  
10 effective, as described herein.

11 51. No new measures are being proposed for the Existing Homes and Direct Audit Install  
12 Program.

13 52. Eligibility. All Residential customers in TEP's service territory are eligible to participate.

14 53. Contractors must meet the following standards in order to be deemed a "program  
15 participating contractor" and thereby eligible to offer the Program's incentives. The standards are:

- 16 • Current Arizona Contractor's license in good standing.
- 17 • Good standing with Better Business Bureau including no outstanding complaints.
- 18 • Completion of program administered training on the use of CheckMe!® diagnostic  
19 software for the analysis of pre- and post-installation HVAC air flow and charge.  
20 Licensed use of the CheckMe!® diagnostic software is provided to participating  
21 contractors at no cost through the Program; and
- 22 • Completion of program administrative processes training.

23 54. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists the  
24 sector, projected costs per category, and total budget for each program.

25 55. Delivery and Marketing. TEP provides program management, including marketing,  
26 recruitment, training, and oversight. TEP also provides data tracking, rebate processing and technical  
27 support.

28 ...

1           56. TEP markets the Program through website promotion, community interest groups, radio,  
2 newspapers, brochures, bill inserts, high bill inquiries, trade ally marketing efforts, contractor  
3 enrollment and training.

4           57. Cost-effectiveness. Most of the Existing measures passed cost-effectiveness, with benefit-  
5 cost ratios ranging from 1.00 to 2.66. (Please see Appendix A-1 for additional detail.)

6           58. Four Existing measures did not pass cost-effectiveness. These consist of two measures  
7 offering duct testing and repair with a minimum 14% reduction in leakage, and two measures offering  
8 replacement of burned out heat pump or air conditioning equipment, along with quality installation,  
9 and duct testing and repair, also resulting in a minimum 14% reduction in leakage:

- 10           • DTR<sub>≥14%</sub> Reduction leakage (All electric);
- 11           • DTR<sub>≥14%</sub> Reduction leakage (Dual fuel);
- 12           • HVAC\_QI-DTR<sub>≥14%</sub> Reduction leakage (All electric); and
- 13           • HVAC\_QI-DTR<sub>≥14%</sub> Reduction leakage (Dual fuel).

14 (No energy savings from new equipment is counted for the latter two measures.)

15           59. Staff Recommendations. Staff has recommended that this existing program be approved for  
16 continuation, with the exception of those measures not passing cost-effectiveness. However, based  
17 on information submitted by TEP, we do not agree. The existing four lower tier duct sealing  
18 measures (earlier referred to as (i) DTR<sub>≥14%</sub> Reduction leakage (All electric); (ii) DTR<sub>≥14%</sub>  
19 Reduction leakage (Dual fuel); (iii) HVAC\_QI-DTR<sub>≥14%</sub> Reduction leakage (All electric); and (iv)  
20 HVAC\_QI-DTR<sub>≥14%</sub> Reduction leakage (Dual Fuel) appear to be cost-effective in practice and  
21 should continue until TEP has had the opportunity to evaluate and report at least twelve months of  
22 data from actual installations. Therefore on or before May 31, 2015, TEP should file a report in this  
23 docket on the savings and cost-effectiveness of the four Existing Homes lower tier duct sealing  
24 measures. Based on Staff's evaluation of the report, any of the four measures found cost-effective  
25 should be continued until they are no longer cost-effective or until further action of the Commission,  
26 while any measures Staff does not find cost-effective should cease to be a program measure.

27 ...

28 ...

1 **Shade Trees**

2           60. Program Description. The Shade Tree Program is an ongoing element of the  
3 Implementation Plan, approved in Decision No. 70455 (August 6, 2008). No modifications have been  
4 proposed for the Shade Tree Program. The Shade Tree Program promotes energy conservation and  
5 environmental benefits by motivating customers to plant desert-adapted trees in locations where the  
6 trees will provide shade and reduce HVAC load. TEP customers may purchase shade trees for \$8.00  
7 per tree, if they agree to plant the trees on the east, west, or south sides of their homes. In addition,  
8 there are Community and Schools tree planting projects, but these must meet the planting criteria  
9 outlined for planting residential trees.

10           61. Program Objectives and Rationale. The objective of the Program is to promote the strategic  
11 planting of trees to provide shade, thereby reducing the cooling load of homes and associated  
12 energy usage, and to educate school-age children and the public on the conservation and  
13 environmental benefits of planting trees.

14           62. Proposed Changes. No modification of the Shade Tree Program was proposed. Cost-  
15 effectiveness was recalculated based on information from the APS Shade Tree Program. The  
16 Program remains cost-effective.

17           63. Eligibility. All Residential customers in TEP's service area are eligible to participate, as  
18 long as they own single-family detached homes, townhomes, and mobile homes. Small businesses,  
19 schools, and community organizations may also participate if they follow the tree type and planting  
20 requirements.

21           64. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
22 the sector, projected costs per category, and total budget for each program.

23           65. Delivery and Marketing. TEP partners with Trees for Tucson, a local non-profit  
24 organization that manages and administers the Program. TEP provides the incentives for trees  
25 planted using Shade Tree Program guidelines.

26           66. Due to the popularity of the Shade Tree Program, EE revenues are not normally  
27 allocated for advertising and promotion. TEP employees currently inform customers about the Shade  
28 Tree Program during speaking engagements and outreach presentations. Other efforts entail website

1 promotion, newspaper advertising, planting and care brochure, presentations at schools, tree tours,  
2 and tree care workshops.

3 67. Cost-Effectiveness. This Existing program has a benefit-cost ratio estimated at 1.34.

4 68. Staff Recommendation. Staff has recommended that the TEP Shade Tree Program be  
5 approved for continuance.

#### 6 Low-Income Weatherization

7 69. Program Description. The Low-Income Weatherization ("LIW") Program is an existing  
8 program designed to enhance the energy efficiency of TEP customers in households with limited  
9 incomes (up to 150% of federal poverty guidelines).

10 70. Program Objectives and Rationale. The primary goal of the LIW Program is to fund  
11 weatherization for low-income homes, to reduce their energy costs and improve comfort and safety  
12 for low-income customers.

13 71. Proposed Changes. No modifications were originally proposed for the LIW program in the  
14 Plan. In communication with Staff, the Company is now requesting to change eligibility from 150%  
15 of Federal Poverty Level ("FPL") to 200% of FPL.

16 72. Analysis. The Department of Energy's Weatherization Assistance Program ("WAP")  
17 maintains an eligibility of 200% of FPL and utility weatherization funds are often combined with  
18 WAP funds. Increasing TEP's eligibility level to 200% of FPL would decrease the cost of program  
19 administration and increase the impact of additional DOE monies for TEP ratepayers. Updating  
20 eligibility would also allow customers who more recently experienced a drop in income, such as from a  
21 job loss, to participate in the Program.

22 73. Eligibility. Program participants must be customers of TEP. Currently, TEP bases  
23 eligibility for the LIW Program at 150% of FPL. TEP is proposing to change eligibility for the LIW  
24 Program from 150% of FPL to 200% of FPL.

25 74. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
26 the sector, projected costs per category, and total budget for each program.

27 75. Delivery and Marketing. TEP's LIW Program is delivered by community action agencies  
28 approved by the Governor's Office on Energy Policy ("GOEP"). Agencies such as Pima County

1 Community Services and the Urban League provide program administration, planning, promotion and  
2 verification of eligibility, as well as labor, materials, equipment and tracking. Funding is provided to  
3 agencies once TEP receives documentation of completed work.

4 76. Issues. There is low participation from some agencies due to the loss of American  
5 Recovery and Reinvestment Act ("ARRA") funding which has reduced budgets and staffing. GOEP  
6 is advising agencies on best practices to maximize funding. In addition, the requested change in  
7 eligibility from 150% of FPL to 200% of FPL would make it easier to use allocated funding.

8 77. In 2013 TEP saw a significant increase in the amount of funding being requested per  
9 home. TEP believes that the housing stock available for weatherization is shifting from evaporative  
10 cooling toward air conditioning. This creates greater opportunities for energy efficiency, but also  
11 means that the costs per home will continue to increase.

12 78. Cost-effectiveness. The LIW Program has a benefit-cost ratio of approximately 1.22

13 79. Eligibility At Other Utilities. The APS weatherization program bases eligibility on 200% of  
14 FPL. UNS Gas and UNS Electric track with LIHEAP, which is currently at 150% of FPL except  
15 where 60 percent of a state's median income is higher. Southwest Gas bases eligibility at 150% of  
16 FPL.

17 80. Recommendations. Changing TEP's eligibility from 150% to 200% of FPL will allow the  
18 Company to make more efficient use of allocated funds. Staff has recommended that TEP's eligibility  
19 be changed to 200% of FPL.

#### 20 **Multi-Family Housing Efficiency Program**

21 81. Program Description. The proposed Multi-Family Housing Efficiency Program ("Multi-  
22 Family Program") would promote energy efficiency in the residential multi-family sector, to properties  
23 with five or more units to install CFLs and low-flow showerheads. Multi-family facility managers  
24 would also be encouraged to participate in the C&I Comprehensive Program for installation of energy  
25 efficiency improvements to common areas.

26 82. Program Analysis/Issues. Barriers to energy efficiency programs in the multi-family market  
27 segment include: (i) split incentives, (ii) lack of capital, and (iii) lack of information about energy  
28 efficiency improvements. These barriers are described in more detail, below.

1           83. Split Incentives. “Split incentives” describes the problem that arises in promoting energy  
2 efficiency in rental units. The builders who construct rental properties, and the owners who would be  
3 responsible for upgrades, do not usually pay the energy bills. Consequently, builders and owners do  
4 not directly benefit from the lower energy costs that arise from investing in efficiency measures,  
5 reducing or eliminating their incentive to participate in energy efficiency programs. At the same time,  
6 the renters who would benefit from lower energy bills have no direct influence over original  
7 construction and, with respect to renovations or retrofits, may not have the authority, the incentive or  
8 the means to invest in energy efficiency for housing they do not own.

9           84. Lack of Capital and Awareness. Other problems can include a lack of capital for  
10 improvements and a lack of awareness about energy efficiency. The Multi-Family Program would  
11 address both through direct installation of low cost energy efficiency improvement in existing  
12 complexes and through energy efficiency improvements to common areas.

13           85. Cost-Effectiveness. Based on Staff’s analysis, the benefit-cost ratio for the three proposed  
14 direct install measures ranges from 2.23 to 3.67. (Please see Appendix A-2 for additional detail.)

15           86. Staff Recommendation. With respect to the proposed new Multi-Family Program, Staff does  
16 not recommend approval at this time because of the Commission’s desire to preserve the status quo  
17 while it evaluates the effectiveness of existing programs and measures. However, we believe TEP  
18 customers should have access to EE programs found cost effective by Staff for TEP and that the  
19 Commission has previously approved for other utility customers. We recommend approval of this  
20 program, which Staff found cost effective for TEP and that the Commission has previously approved  
21 for other utility customers.

## 22 NON-RESIDENTIAL PROGRAMS

23           87. TEP Request Regarding Commercial Customer Eligibility. TEP has requested that the  
24 Commission approve the offering of all commercial measures to all customers participating in any  
25 commercial program. Because program costs may vary significantly from program to program, and  
26 because the usage patterns for various types of Non-residential customers also varies, a measure that is  
27 cost-effective in one program may not be cost-effective in another. Staff has recommended that the  
28 ...

1 Commission not approve offering all commercial measures to all customers participating in any  
2 commercial program.

3 **C&I Comprehensive**

4 88. Program Description. The Program offers incentives to Non-residential customers for  
5 installing cost-effective retrofit and replace-on-burnout (“ROB”) measures in existing facilities. The  
6 C&I Comprehensive Program provides incentives to TEP’s large Non-residential customers to install  
7 measures such as energy-efficient lighting equipment and controls, HVAC equipment, motors and  
8 motor drives, compressed air and leak-repair measures, and refrigeration. Originally approved in  
9 Decision No. 70403 (July 3, 2008), the Program was then named the Non-residential Existing  
10 Facilities Program.

11 89. Program Objectives and Rationale. The Program addresses high first costs and limited  
12 investment capital for retrofits and ROBs, limited awareness of the potential energy savings and  
13 requirements for short-term payback.

14 90. Proposed Changes. New measures were proposed for this program.

15 91. Eligibility. The Program is available to all existing commercial customers within TEP’s  
16 service territory. Although targeted to large commercial and industrial customers, small business  
17 customers and school facilities are allowed to participate in the C&I Comprehensive Program as long  
18 as funds are available.

19 92. Budget. See TABLE 1: TEP’S PROPOSED 2014/2015 BUDGET, herein, which lists  
20 the sector, projected costs per category, and total budget for each program. Participation in this  
21 program has been greater than anticipated. The Company is requesting a budget that will allow it to  
22 accommodate participation at the current level through 2015. The requested budget is lower than the  
23 budget currently approved by the Commission.

24 93. Delivery and Marketing. The Program promotes participation either directly by large  
25 commercial customers, or through installing contractors. Marketing includes educational seminars  
26 tailored to the business market, website promotion, presentations at professional and community  
27 forums and direct outreach to customers.

28 ...

1           94. Cost-effectiveness. Most of the Existing measures are cost-effective, with the exception of  
2 High Efficiency Ice Makers, Standard T8 Lighting, and Variable Speed Screw Compressors. The 18  
3 SEER Packaged and Split AC measures approaches cost-effectiveness at 0.96 and Staff has  
4 recommended that it be approved for continuance because the measure is likely to be cost-effective in  
5 practice. The remaining Existing measures are cost-effective in a range 1.00 to 6.72.

6           95. A majority of the proposed measures also pass, in a range from 1.00 to 10.85, although  
7 the Cooling Tower Subcooling, EMS-Lighting Schedule, LED Channel Signs and Refrigerated Display  
8 Gaskets measures failed. High Performance Glazing is a proposed measure that approaches cost-  
9 effectiveness at 0.97. (Please see Appendix A-1 for additional detail.)

10           96. Staff Recommendations. Staff has recommended that cost-effective existing measures listed  
11 in Appendix A-1 remain in place, and that any non-cost-effective existing measures be terminated.  
12 Staff has also recommended that the 18 SEER Packaged and Split AC measure also remain in place,  
13 because its benefit-cost ratio is close to 1.0 and the measure is likely to be cost-effective in practice.

14           97. With respect to the proposed new measures, Staff does not recommend approval at this  
15 time because of the Commission's desire to preserve the status quo while it evaluates the effectiveness  
16 of existing programs and measures. However, we believe TEP customers should have access to EE  
17 measures found cost effective by Staff for TEP and that the Commission has previously approved for  
18 other utility customers. We recommend approval of the EE measures found cost effective by Staff for  
19 TEP and that the Commission has previously approved for other utility customers.

#### 20 Commercial New Construction

21           98. Program Description. The Commercial New Construction Program is an existing program  
22 approved in Decision No. 70459 (August 6, 2008). No modifications are planned for this program.  
23 The Program is performance based and targets owners/developers of new commercial facilities,  
24 providing incentives for commercial facilities incorporating energy-efficient construction and designs.  
25 Incentives go to both the owner and developer, and to design teams. In addition, the Program  
26 provides technical support and consumer education regarding energy efficiency options for new  
27 commercial construction.

28 ...



1           99. Program Objectives and Rationale. The primary goal is to encourage more energy- efficient  
2 building designs in TEP's service area. It encourages commercial building owners and developers and  
3 the design community to consider incorporating energy efficiency as early as possible in the design  
4 process.

5           100. Eligibility. Participation is limited to owners, developers, and designers involved in  
6 constructing new commercial buildings in TEP's service territory.

7           101. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
8 the sector, projected costs per category, and total budget for each program. Demand for this program  
9 has increased, and the Company anticipates that it will remain steady throughout 2014. TEP is  
10 requesting a budget comparable to its currently-approved budget.

11           102. Delivery and Marketing. The IC collects data, compares the building design to ASHRAE  
12 90.1 Standard 2004 version and verifies energy savings and costs. There are no significant changes  
13 planned for delivery or marketing for this program.

14           103. Cost-effectiveness. The existing measures are cost-effective, with benefit-cost ratios in a  
15 range from 1.00 to 5.31, with the exception of EER Rated Packaged AC (11.5-20 tons, 11.24 EER).  
16 The Design Assistance Incentives measure, however, has no energy savings allocated to it and Staff  
17 does not, for this reason, consider it cost-effective.

18           104. Staff Recommendations. Staff has recommended that the Commercial New Construction  
19 Program remain in place, but that the EER-Rated Packaged AC (11.5-20 tons, 11.24 EER) measure  
20 and the Design Assistance Incentives measure be terminated.

#### 21 **Bid for Efficiency**

22           105. Program Description. The Bid for Efficiency ("BFE") Pilot is a proposed program. There  
23 are no individual measures in the BFE Program. Customers or project sponsors can design their own  
24 EE projects and then bid competitively for incentives within program guidelines. BFE participants  
25 and project sponsors include commercial customers, Energy Service Companies ("ESCOs") or other  
26 aggregators who organize proposals that involve multiple sites. Results will be verified through  
27 Measurement, Evaluation, and Research activity.

28 ...

1           106. Program Objectives and Rationale. The Program fosters customer-driven project activity  
2 (e.g., customers select appropriate measures and professionals to implement measures), and  
3 encourages the implementation of comprehensive, multi-measure projects. BFE encourages  
4 customers and project sponsors to think creatively and to develop projects designed to optimize  
5 system energy use as a whole, rather than considering the energy usage of each individual piece.

6           107. Proposed Changes. The Bid for Efficiency Program is proposed.

7           108. Eligibility. The Bid for Efficiency Program would be available to Non-residential  
8 customers in TEP's service territory.

9           109. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
10 the sector, projected costs per category, and total budget for each program.

11           110. Delivery and Marketing. The Program is delivered through an IC. TEP markets the  
12 Program directly to key customers and aggregators. Particular emphasis is paid to key market sectors  
13 such as grocery and convenience stores. TEP, and/or its IC, conducts informational meetings with  
14 potential participants and project sponsors to explain the Program rules and encourage participation.

15           111. The IC (i) collects necessary data from applications and verifies that all necessary  
16 information is provided by the customer (ii) compares individual bids and verifies analysis of energy  
17 savings and estimated cost from each bid; (iii) selects jobs based on the lowest cost per kWh reduction  
18 and notifies applicants of the award; and (iv) conducts post-installation inspection and verification of  
19 installation.

20           112. Cost-effectiveness. Based on Staff's analysis, the benefit-cost ratio for the proposed new  
21 Bid for Efficiency Program is 1.52.

22           113. Staff Recommendations. With respect to the proposed new Bid for Efficiency Program,  
23 Staff does not recommend approval at this time because of the Commission's desire to preserve the  
24 status quo while it evaluates the effectiveness of existing programs and measures. However, we  
25 believe TEP customers should have access to EE programs found cost effective by Staff for TEP and  
26 that the Commission has previously approved for other utility customers. We recommend approval of  
27 this program, which Staff found cost effective for TEP and that the Commission has previously  
28 approved for other utility customers.

1 **Retro-Commissioning**

2 114. Program Description. The Retro-Commissioning (“RCx”) Program is a proposed new  
3 program. The Program would use a systematic approach to identify building equipment and processes  
4 that are not achieving optimal efficiency in existing facilities. Eligible program applicants receive free  
5 screening energy audits. Participants also receive training to ensure proper operating and maintenance  
6 practices over time.

7 115. Program Objectives and Rationale. The RCx Program seeks to generate significant energy  
8 savings by returning existing equipment to an efficient operating condition. The Program delivers  
9 customer benefits by lowering energy bills and improving building performance and occupant comfort  
10 while reducing maintenance calls. The Program develops an RCx contractor pool, and enables TEP to  
11 build relationships with C&I customers, thus leading to other areas of participation in TEP’s portfolio  
12 of EE programs. RCx programs in other utility service territories have delivered average energy  
13 savings in the range of 5-15% per facility, and measures implemented as a result of the Program’s  
14 activity typically pay for themselves in less than two years.

15 116. Proposed Changes. Retro Commissioning is a proposed program.

16 117. Eligibility. Commercial customers in TEP’s service territory would be eligible for this  
17 program.

18 118. Budget. See TABLE 1: TEP’S PROPOSED 2014/2015 BUDGET, herein, which lists  
19 the sector, projected costs per category, and total budget for each program.

20 119. Delivery and Marketing. The RCx Program is marketed using traditional forms of media  
21 (e.g., print, web, newsletters, etc.), as well as targeted direct mail and outreach to engineering and trade  
22 associations. TEP and the IC also reach out directly to contractors who currently are, or could be,  
23 practicing in this area. The TEP website has been updated to include information and links for  
24 participation. TEP account managers have been utilized to reach out to larger customers to encourage  
25 participation.

26 120. Cost-effectiveness. Based on Staff’s analysis, the benefit-cost ratio for the proposed new  
27 Retro-Commissioning Program is 2.46.

28 ...

1           121. Staff Recommendations. With respect to the proposed new Retro-Commissioning  
2 Program, Staff does not recommend approval at this time because of the Commission's desire to  
3 preserve the status quo while it evaluates the effectiveness of existing programs and measures.  
4 However, we believe TEP customers should have access to EE programs found cost effective by Staff  
5 for TEP and that the Commission has previously approved for other utility customers. We  
6 recommend approval of this program, which Staff found cost effective for TEP and that the  
7 Commission has previously approved for other utility customers.

8 **Small Business Direct Install & School Facilities**

9           122. Program Description. The Small Business Direct Install ("SBDI") Program is an existing  
10 TEP Non-residential program approved in Decision No. 70457 (August 6, 2008). The Program  
11 provides incentives directly to contractors for the installation of high efficiency measures at existing  
12 small business facilities. These measures include lighting, motors, HVAC and refrigeration measures  
13 for smaller Non-residential customers.

14           123. Proposed Schools Facilities Component. Originally, the Company filed to create a separate  
15 School Facilities Program, similar the existing SBDI Program, but with a separate budget. The  
16 Company is now proposing to make School Facilities a component of SBDI. The modified Program  
17 would include a component providing incentives to contractors for providing turnkey energy  
18 efficiency installations at existing school facilities. The modified Program would utilize the same  
19 delivery method and pay incentives for the same measures offered by the existing SBDI Program. The  
20 UNS Electric Schools Program was combined with the UNSE C&I Program in Decision No. 74262.  
21 (January 6, 2014.) The modified Program would utilize the same delivery method and pay incentives  
22 for the same measures offered by the existing SBDI Program.

23           124. Program Objectives and Rationale. The primary purpose of the existing component  
24 of the Program is to promote the installation of energy efficiency measures by small commercial  
25 customers at existing facilities. The primary purpose of the proposed new Schools Facilities  
26 component is to promote the installation of energy efficiency measures by schools at their existing  
27 facilities.

28 ...

1           125. Proposed Changes. TEP initially proposed the new School Facilities Program as a  
2 separate program, but is now proposing to combine it with the existing SBDI Program. The Schools  
3 Facilities component would be similar to the current SBDI Program, but would target schools rather  
4 than small commercial customers.

5           126. Issues. TEP has experienced slower-than-anticipated ramp-up since Decision No.  
6 73910. The funding level requested by the Company will allow it to expand its efforts to increase  
7 participation by small businesses in its service territory. This funding level is less than the current  
8 approved budget for the Program. The Company states that the Program will remain cost-effective,  
9 increasing in cost-effectiveness as participation improves.

10           127. Eligibility. The existing Program is open to commercial customers within TEP's  
11 service territory who are taking service under a small commercial rate tariff. The modified program  
12 would be open to all existing K-12 school facilities, including charter schools, within TEP's service  
13 territory.

14           128. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
15 the sector, projected costs per category, and total budget for each program.

16           129. Delivery and Marketing. TEP's IC is the primary contact for small business customers.  
17 The IC handles the application and incentive processing, monitors the installation contractors, tracks  
18 and reports participation and is responsible for quality control and management of the delivery  
19 process.

20           130. Cost-effectiveness. Most of the Existing SBDI measures are cost-effective, with benefit-  
21 cost ratios ranging from 1.01 to 3.38. The following existing measures are not cost-effective: Screw-  
22 in cold cathode CFLs; and Standard T8 Lighting.

23           131. Most of the proposed measures are cost-effective in a range from 1.02 to 4.12. The  
24 proposed 16 SEER Packaged and Split AC measure approaches cost-effectiveness at 0.96 and is likely  
25 to be cost-effective in practice. Advanced Power Strips—Occupancy Sensors are not cost-effective,  
26 nor is Standard T8 Lighting.

27           132. Staff Recommendations. Staff has recommended that cost-effective existing measures be  
28 approved for continuance. The two non-cost-effective existing measures, as listed above, should be

1 terminated. With respect to the proposed new measures, the two non-cost-effective measures should  
2 not be approved and Staff does not recommend approval of the cost-effective measures because of  
3 the Commission's desire to preserve the status quo while it evaluates the effectiveness of existing  
4 programs and measures. However, we believe TEP customers should have access to EE measures  
5 found cost effective by Staff for TEP and that the Commission has previously approved for other  
6 utility customers. We recommend approval of the EE measures found cost effective by Staff for TEP  
7 and that the Commission has previously approved for other utility customers.

8 133. Staff has recommended that schools be eligible to participate in the existing SBDI  
9 Program to the extent that the measures installed would be cost-effective. (see Appendix 1-A)

#### 10 **CHP Program-Pilot**

11 134. *Program Description.* The CHP Program is a proposed pilot. Combined Heat and Power  
12 ("CHP") also defined as "cogeneration", means a system that generates electricity and useful thermal  
13 energy in a single integrated system. TEP proposes this program for use by C&I customers as allowed  
14 in the Electric Energy Efficiency Rules, A.A.C. R14-2-2404(F). TEP originally planned a CHP  
15 Program in which it would work with Southwest Gas, but does not wish to be limited to working with  
16 a single gas utility.

17 135. TEP is planning two projects, described below. The Company is not paying  
18 incentives, but is seeking to recover approximately \$2,600 in Delivery costs. TEP is also seeking to  
19 count the energy savings from these projects toward the EE Standard:

- 20 • Pima County Jail: The project consists of a 100 kW generator (operates 24  
21 hours/day) which utilizes the waste energy to heat the existing domestic hot water  
22 supply. Estimated annual kWh savings (generator output) = 750,000 kWh per  
23 year.
- 24 • University of Arizona Health Sciences Center (UAHSC): The project consists of a  
25 5.5 MW generator (operates 24 hours/day) which utilizes the waste energy to  
26 provide steam for the UAHSC's existing steam processes. Estimated annual kWh  
27 savings (generator output) = 41 Million kWh per year.

26 136. *Program Objectives and Rationale.* The Company states that CHP is an affordable, clean,  
27 and reliable source of generation for meeting Arizona's energy needs and should be considered a key

28 ...

1 component to economic strategies. The market potential for CHP could contribute significantly to  
2 energy conservation in Arizona.

3 137. Program Eligibility. Customers must receive electric service from TEP to be eligible for  
4 participation. The CHP customer must comply with the Net Metering Rules and TEP's Rider R-4  
5 efficiency minimums (42.5% efficiency or greater) to qualify.

6 138. Products and Services. TEP assists customers interested in CHP with engineering and  
7 interconnection services. Qualifying CHP customers save on utility bills by not having to utilize a  
8 Partial Requirement Service rate.

9 139. Delivery Strategy, and Administration. TEP provides program delivery, administration and  
10 assists with interconnection design expertise.

11 140. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
12 the sector, projected costs per category, and total budget for each program.

13 141. Delivery and Marketing. Information regarding Rider R-4 is available to customers  
14 through TEP's website www.tep.com. Local gas providers also notify customers of the advantages of  
15 CHP and suggest they contact TEP for assistance. Because each CHP project has unique  
16 characteristics, customers must contact TEP and request engineering and interconnection assistance.

17 142. Cost-effectiveness. Each project is different, and each project must be evaluated  
18 individually, but Staff estimates cost-effectiveness at 6.66.

19 143. Recommendations. With respect to the proposed new Combined Heat and Power  
20 Program, Staff does not recommend approval at this time because of the Commission's desire to  
21 preserve the status quo while it evaluates the effectiveness of existing programs and measures. Staff  
22 has recommended, however, that TEP be allowed to count toward the Energy Efficiency Standard  
23 any savings arising from CHP projects in its service territory that conform to the requirements of the  
24 Energy Efficiency Rules. However, we approve this program because of its high cost effectiveness,  
25 and because it would help to address the barriers to CHP deployment that were identified by experts  
26 in the Emerging Technology workshops, including the need for engineering and interconnection  
27 assistance. We also believe that TEP should prioritize funding for this program within the allotted  
28 budget because of its high cost effectiveness of 6.66, as determined by Staff.

1 **BEHAVIORAL SECTOR**

2 **Behavioral Comprehensive**

3 144. Program Description. Behavioral Comprehensive is a proposed new program. It would  
4 offer new educational/behavioral subprograms including (i) Direct Canvassing, (ii) CFL Promotion  
5 and Outreach; and (iii) In-Home Energy Displays. In addition, the existing K-12 Education and  
6 Community Education subprograms would be moved into the Behavioral Comprehensive from the  
7 Consumer Education and Outreach Program.

8 145. Below is a table listing and describing the various components of the Behavioral  
9 Comprehensive Program.

Subprogram	Status	Description
Direct Canvassing	Proposed	Door to door awareness and direct install campaign
K-12 Education	Existing	Classroom education including take home direct install kits
Community Education	Existing	"Train the trainer" approach and direct install kits
CFL Promotion and Outreach	Proposed	CFL bulb promotion and education at outreach events
In-Home Energy Displays	Proposed	In Home Energy Displays intended to inform customers of 15 minute interval data to cause behavioral changes.

17  
18 146. Program Objectives and Rationale. The main objective of the Program is to promote (i)  
19 habitual behaviors, such as adjusting thermostats, and turning off unnecessary lights; (ii) small  
20 purchases, such as CFLs, and encourage HVAC maintenance; and (iii) larger purchases of energy-  
21 efficient appliances.

22 147. Proposed Changes. Two pre-existing measures, K-12 Education and Community  
23 Education, will be shifted to Behavioral Comprehensive from the existing Consumer Education. TEP  
24 also proposes to add three new measures.

25 148. Eligibility. Residential customers in TEP's service territory are eligible to participate.

26 149. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
27 the sector, projected costs per category, and total budget for each program.

28 ...



1           150. Delivery and Marketing. Delivery of the Program is by TEP staff, except for the K-12  
2 measure, which is delivered by the Environmental Education Exchange.

3           151. Cost-effectiveness. The existing K-12 and Community Education subprograms are cost-  
4 effective, with ratios of 2.57 and 2.16. The proposed CFL Outreach and Direct Canvassing  
5 subprograms are cost-effective, with ratios of 1.85 and 1.88. In-Home Energy Displays are not cost-  
6 effective at 0.60 and have been discontinued.

7           152. Staff Recommendations. Staff has recommended that the existing subprograms, K-12 and  
8 Community Educations, remain in place until further Commission action. With respect to the  
9 proposed new Behavioral Comprehensive Program, Staff does not recommend approval of the pro-  
10 posed new subprograms at this time because of the Commission's desire to preserve the status quo  
11 while it evaluates the effectiveness of existing programs and measures. However, we believe TEP  
12 customers should have access to EE programs found cost effective by Staff for TEP and that the  
13 Commission has previously approved for other utility customers. We recommend approval of this  
14 program, which Staff found cost effective for TEP and that the Commission has previously approved  
15 for other utility customers.

#### 16 Home Energy Reports

17           153. Program Description. This Program is inactive. Home Energy Reports provided energy  
18 reports to customers regarding their energy consumption patterns in comparison to other customers.  
19 The intent of the Program was to inspire customers to decrease their energy usage based on this  
20 information. Although cost-effective for TEP, it was not cost-effective for UNS Electric, and the  
21 Program was not approved for UNS Gas customers. Because the Program cannot utilize economies  
22 of scale, as well as customer complaints, TEP decided not to renew the contract with the vendor of  
23 this program for 2014.

24           154. The Company negotiated with the vender to maintain the web-based home energy  
25 report and savings plan tools. TEP will be issuing an RFP in an effort to find a delivery model for  
26 home energy reports that provides greater cost-effectiveness and better consumer satisfaction.

27 ...

28 ...

1           155.    Program Objectives and Rationale. The objective of the Program was to generate savings  
2 for the TEP portfolio, to promote the Company's other EE programs, and lower energy bills for  
3 consumers.

4           156.    Proposed Changes. The Company is seeking a new delivery model in order to make  
5 Home Energy Reports more cost-effective and consumer-friendly.

6           157.    Eligibility. Residential customers in TEP's service territory will be eligible to  
7 participate.

8           158.    Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
9 the sector, projected costs per category, and total budget for each program.

10          159.    Delivery and Marketing. A new delivery and marketing model has yet to be established  
11 for this program.

12          160.    Cost-effectiveness. Cost-effectiveness should be re-evaluated based on the new delivery  
13 model. The evaluation should include all costs associated with the Program and only those savings  
14 which can be reasonably attributed to the Home Energy Reports.

15          161.    Staff Recommendations. Staff has recommended that the Program remain inactive until  
16 further order of the Commission.

17    **SUPPORT SECTOR**

18    **Consumer Education and Outreach**

19          162.    Program Description. The Consumer Education and Outreach ("CEO") Program is an  
20 existing program, approved by the Commission in Decision No. 70402 (July 3, 2008). The CEO  
21 Program is intended to both increase participation in TEP's DSM/EE portfolio of programs and to  
22 effect a broader market transformation.

23          163.    The CEO Program has an advertising component covering seasonal advertisements  
24 including energy saving tips, the on-line energy audit, and the marketing of other EE programs. The  
25 CEO Program also provides Time-of-Use education for Residential and Small Commercial customers,  
26 to teach them about the benefit of TOU rates and enable them to maximize savings through load  
27 shifting.

28    ...

1           164. Program Objectives and Rationale. The Program consists of educational and marketing  
2 material to inform customers on how to achieve energy savings and about the benefits of  
3 conservation.

4           165. Proposed Changes. The K-12 and Community Education subprograms are being moved  
5 into the Behavioral Comprehensive Program.

6           166. Eligibility. The CEO Program targets Residential and Small Commercial customers in  
7 TEP's service territory.

8           167. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
9 the sector, projected costs per category, and total budget for each program.

10           168. Delivery and Marketing. The CEO Program utilizes radio, print, bill stuffers and social  
11 media, and these are overseen by utility staff, which also oversees the development of customer  
12 questionnaires and surveys.

13           169. Cost-effectiveness. The Company notes that this educational and marketing program does  
14 not produce direct energy savings and is part of the cost-effectiveness of the portfolio as a whole. In  
15 contrast, A.A. C. R14-2-2410(F) states that "Educational programs shall be analyzed for cost-  
16 effectiveness based on estimated energy and peak demand savings resulting from increased awareness  
17 about energy use and opportunities for saving energy."

18           170. Staff Recommendations. Staff has recommended that the Consumer Education and  
19 Outreach Program be retained, but that it be analyzed in accordance with A.A.C. R14-2-2410(F) and  
20 that this information be provided in the progress reports filed in compliance with the Energy  
21 Efficiency Standards.

22 **Energy Codes and Standards and Waivers of A.A.C. R14-2-2404(E)**

23           171. Program Description. This is a proposed TEP program. Specific program activities will  
24 depend on the needs of the local code officials. Possible activities include the following:

- 25                   • Education of local code officials and building professionals on existing standards;
- 26                   • Providing documentation of the specific local benefits of code enforcement, which  
27 can promote energy code changes over time;

28 ...

- 1                   • Ensuring utility incentive programs align with local energy codes and appliance  
2 standards;
- 3                   • Collaboration with relevant stakeholders to build a more robust community, with  
4 the goal of advancing strong, effective building energy codes and appliance  
5 standards across the local jurisdictions within TEP's service territory;
- 6                   • Advocating for energy code and appliance standards updates over time; and
- 7                   • Participation in the legislative process to gain approval for new code adoption.

8           172. Program Objectives and Rationale. The Program will employ a variety of tactics aimed at: i)  
9 improving levels of compliance with existing building energy codes and appliance standards; and ii)  
10 supporting periodic updates to energy codes and appliance standards as warranted by market  
11 conditions.

12           173. Under R14-2-2404(E) of the EE Rule, utilities are allowed to claim an energy savings  
13 credit for building codes. R14-2-2404(E) states as follows:

14                   "An affected utility may count toward meeting the standard up to one third of the  
15 energy savings, resulting from energy efficiency building codes, that are quantified and  
16 reported through a measurement and evaluation study undertaken by the affected  
17 utility."

18           174. Waivers. TEP is requesting two waivers of A.A.C. R14-2-2404(E) in relation to the  
19 Program:

- 20                   • A waiver from A.A.C. R14-2-2404(E) to allow TEP to count energy savings  
21 resulting from EE appliance standards, as was approved for UNS Electric  
22 (Decision No. 72747, January 20, 2012) and APS (Decision No. 73089, April 5,  
23 2012).
- 24                   • A waiver from A.A.C. R14-2-2404(E) to allow TEP to count toward meeting the  
25 EE Standard 100% of the energy savings resulting from updates in EE building  
26 codes and EE appliance standards.

27           175. Budget. See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
28 the sector, projected costs per category, and total budget for each program.

...

1           176. Cost-effectiveness. Staff believes that additional review is necessary so that a reasonable  
2 benefit-cost ratio can be established for Code activities.

3           177. Staff Recommendations. In order to maintain the status quo with respect to EE measures  
4 and programs, Staff has recommended that the Codes Program not be approved. However, we  
5 believe TEP customers should have access to EE programs found cost effective by Staff for TEP and  
6 that the Commission has previously approved for other utility customers. We recommend approval of  
7 this program, which Staff found cost effective for TEP and that the Commission has previously  
8 approved for other utility customers.

9           178. Should the Company opt to engage in Code activities outside a program, but in  
10 accordance with R14-2-2404(E), Staff has recommended the following.

- 11           • That TEP not receive a waiver to use 100% of building code savings. Use of 100%  
12 of building code savings is not reasonable. APS requested a similar waiver and was  
13 not granted one. (Decision No. 74406).
- 14           • That TEP be granted a waiver from R14-2-2404(E) for up to one third of energy  
15 savings from energy efficiency appliance standards, if the energy savings are  
16 quantified and reported through a measurement and evaluation study undertaken  
17 by the Company.
- 18           • That, as with UNSE and APS, savings from changes to building and appliance  
19 codes may not be used in the energy savings calculations used to determine the  
20 amount of the Company's Performance Incentive.

## 21 **UTILITY IMPROVEMENT SECTOR**

### 22 **Program Development, Analysis and Reporting**

#### 23 Conservation Voltage Reduction and Generation Improvement and Facilities Upgrade.

24           179. The Conservation Voltage Reduction and Generation Improvement and Facilities  
25 Upgrade programs are TEP's proposed Utility Improvement programs. The Conservation Voltage  
26 Reduction Program would produce demand and energy savings through the physical adjustment of  
27 transformer settings governing voltage at the substation level. The Facilities Upgrade Program would  
28 ...

1 include installation of high efficiency motors and variable speed drives, along with projects to reduce a  
2 power plant's auxiliary power or increase capacity.

3 180. In its Plan, the Company asked that all the costs associated with the Conservation  
4 Voltage Reduction Program be recovered through the DSM surcharge. With respect to the  
5 Generation Improvement and Facilities Upgrade Program, TEP also requested a waiver of A.A.C.  
6 R14-2-2404(H) to allow TEP to count energy savings from improvements in its utility delivery system  
7 toward the Standard. TEP is requesting to recover only the administrative costs associated with  
8 preparing, reporting and validating savings.

9 181. Commission Decision Regarding APS Generation and Delivery System Improvements and Facilities  
10 Upgrades. Decision No. 74406 allowed APS to count energy savings resulting from generation and  
11 delivery system improvements and facilities upgrades toward the EE Standard. APS did not request  
12 that the costs be recovered through the APS DSM surcharge, only that the savings count toward  
13 meeting the Standard. In addition, savings from generation and delivery system improvements are not  
14 permitted to increase the Lost Fixed Cost Recovery ("LFCR"), qualify for performance incentive, or  
15 otherwise increase the performance incentive amount.

16 Staff Recommendations

17 182. Staff has recommended that the Conservation Voltage Reduction and Generation  
18 Improvement and Facilities Upgrade programs be approved, but that TEP not be allowed to recover  
19 the associated costs through the DSM surcharge, thereby having no impact on the status quo with  
20 respect to new program costs. Staff believes that these proposed in-house programs to improve the  
21 Company's physical plant may benefit ratepayers, but that the costs related to them should be  
22 evaluated for recovery in a rate case. Staff also has recommended that the requested waiver be  
23 approved, but that any savings not be used to increase the LFCR, qualify for performance incentive,  
24 or otherwise increase the performance incentive amount.

25 **DEMAND RESPONSE SECTOR**

26 **C&I Direct Load Response**

27 183. Program Description. The C&I Direct Load Control program is an existing program  
28 approved by the Commission in Decision No. 71787 (July 12, 2010). C&I Direct Load Control is a

1 load curtailment program. Customers are compensated with incentives for their participation at  
2 negotiated levels.

3 184. *Program Objectives and Rationale.* Modifications to controls for chillers, rooftop AC units,  
4 lighting, fans, and other end-uses can reduce demand at peak times or during emergencies. In  
5 addition, the Program can provide other benefits, including i) avoided firm capacity that would  
6 otherwise be required to meet reserve requirements; ii) reduced or avoided open-market power  
7 purchases during period of high energy prices; and iii) greater grid stability and reduction in outages.

8 185. *Proposed Changes.* No modifications are proposed for this program.

9 186. *Eligibility.* This program is open to Non-residential customers in TEP's service  
10 territory with demand of at least 100 kW.

11 187. *Budget.* See TABLE 1: TEP'S PROPOSED 2014/2015 BUDGET, herein, which lists  
12 the sector, projected costs per category, and total budget for each program.

13 188. *Delivery and Marketing.* The Program is delivered on a turn-key basis by a third-party IC  
14 who negotiates load reduction agreements with multiple customers and aggregates these customers to  
15 provide TEP with a guaranteed load reduction capacity. Because the demand response aggregator is  
16 obligated to provide the required megawatts of load curtailment, the process is similar to a power  
17 purchase agreement.

18 189. *Cost-effectiveness.* The benefit-cost ratio for this program is estimated by Staff at 3.40.

19 190. *Staff Recommendations.* The C&I Direct Load Control Program is cost-effective, and  
20 Staff has recommended that the Commission approve it for continuance.

### 21 **Related Filing Which May Impact the DSM Surcharge**

22 191. *Freeport-McMoRan Request for Exemption.* On March 17, 2014, Freeport-McMoRan  
23 Copper & Gold, Inc. ("Freeport") filed an application requesting an exemption from Energy  
24 Efficiency programs and related surcharge. Freeport states that its exceptionally large consumption of  
25 electric power makes it "more efficient for the Company [Freeport] to pursue energy efficiency on its  
26 own behalf rather than as a participant or funder of utility energy efficiency programs."<sup>2</sup>

27 \_\_\_\_\_  
28 <sup>2</sup> Freeport has mining operations in Indonesia, North America, South America and the Democratic Republic of Congo, in addition to oil and gas assets in the U.S. and the Gulf of Mexico, and has reported approximately \$63.47 billion in total assets for 2013.

1           192. In its application, Freeport states that it has “historically budgeted some \$10 million  
2 annually on energy-related technology.” In communication with Staff, Freeport explained that it  
3           “has patents and patent applications around technology that consumes less energy per  
4 pound of copper produced than the process it replaces. . . . The historic \$10 million  
5 annual budget is spent seeking ways to more efficiently produce copper in the conduct  
of our mining processes.”

6           193. Background. The basis for Non-residential DSM payments was altered in the most  
7 recent TEP Rate case. Non-residential customers in TEP’s service territory now pay into the DSM  
8 Surcharge based on a percentage of the bill, rather than on a per-kWh basis. Decision No. 73912,  
9 June 27, 2013, stated that:

10           “The DSMS rate until further Order of the Commission is \$0.002232 per kWh for residential  
11 customer and 2.5479 percent of the total bill (before RES, LFCR, assessments and taxes) for  
non-residential customers.”

12           194. Impact on Residential Customers. Exempting Freeport reduces the amount of revenue  
13 Freeport contributes through the DSM Surcharge, but would also reduce the level of savings required  
14 for TEP to meet the EE Standard, thereby reducing the cost of meeting the EE Standard. In the case  
15 of a utility that is on a trajectory that would allow it to meet the EE Standard, the exemption of  
16 Freeport could, potentially, result in lower EE costs for other ratepayers. However, TEP states that,  
17 given the current level of DSM revenues, it does not expect to meet the 2014 Standard with or  
18 without Freeport. The Company is, instead, trying to maximize savings per dollar spent based on its  
19 approved budget. In this scenario, any exemption means that ratepayers remaining in the pool of  
20 those paying into the DSM Surcharge will make up the difference. In the case of Freeport, Staff  
21 estimates, and TEP confirms, that the impact on Residential customers will be approximately 14 cents  
22 a month or \$1.68 per year.

23           195. Recent Projects and Incentives Received. In 2013 Freeport received incentives equaling more  
24 than \$2.5 million from TEP for two projects at its mine in Sierrita, in TEP’s service territory. The two  
25 projects are projected to save approximately 2.5 million kWh annually.

26           196. Although Freeport received significantly more in incentives in 2013 than it paid in  
27 through the surcharge, TEP has informed Staff that, over time, Freeport has paid in more through the  
28 surcharge than it has received in incentives.



1           2197. Analysis. Energy efficiency benefits ratepayers of all classes by postponing or avoiding  
2 new generation, and Residential and Non-residential customers are subject to the surcharge which  
3 recovers TEP's costs associated with achieving this benefit. However, Paragraph 7.6 of the Settlement  
4 Agreement states that:

5                    "Any customer who can demonstrate an active DSM program and whose single site usage  
6 is 25 MW or greater may file a petition with the Commission for an exemption from the  
7 DSM adjustor and, if approved, will be removed from the Energy Efficiency Standard  
8 denominator."

8           2198. Freeport has demonstrated that it currently has an active DSM program at a 25 MW or  
9 greater site. Therefore, it is in keeping with Decision No. 73912 to exempt Freeport-McMoRan  
10 TEP's energy efficiency programs and surcharge. Staff also notes that Freeport is significantly  
11 motivated to work toward more efficient uses of energy in order to control or reduce its costs.

12           2199. Recommendations. Staff has recommended that Freeport be exempted from the DSM  
13 surcharge until further order of the Commission, but not on a company-wide basis. As per the TEP  
14 Settlement Agreement, the single location account above 25 MW located in TEP's service territory  
15 (the Sierrita Mine) should alone be exempted. Other Freeport locations in the TEP service territory  
16 should continue to pay into the DSM surcharge.

17           2200. Staff has recommended, if the Freeport Sierrita location is exempted, that it no longer  
18 receive any incentives from the TEP EE portfolio of programs.

19           2201. Staff has recommended that the Commission require Freeport to pay into the TEP  
20 DSM bank an amount equal to what it would have paid during the period of its exemption, along with  
21 reasonable interest, should Freeport opt to return to non-exempt status regarding the TEP DSM  
22 programs and surcharge.

23           2202. Staff has also recommended that Freeport's exemption be limited in that it must  
24 continue to report energy efficiency activities and savings on an annual basis, as verified by an  
25 independent third party, to TEP. We will not, however, require the information submitted by  
26 Freeport to be verified by an independent third party

27           2203. Staff has also recommended that Freeport's energy savings be reported by TEP in its  
28 Progress Report filed in March of each year.

1           204. Staff has also recommended that when TEP files its next EE Implementation Plan or  
2 by October 1, 2015, whichever is sooner, TEP report what its budget and DSM surcharge would be  
3 had Freeport not been exempted.

4 **Performance Incentive**

5           205. *Performance Incentive.* Decision No. 73912 states that the performance incentive should  
6 be calculated at 8 percent of the net benefits capped at \$0.0125 per kWh saved, similar to the  
7 performance incentive approved for APS in Docket No. E-01345A-12-0224.

8           206. Decision No. 73912, from the most recent rate case, ordered that:

9                           “[T]he performance incentive, tied to the cost effective energy savings, shall  
10 be reviewed, established and approved as appropriate as part of the  
11 Commission’s Energy Efficiency Implementation Plan and DSM Surcharge  
reset proceedings for Tucson Electric Power Company.”

12           207. On March 2, 2014, TEP calculated a Performance Incentive of \$1,959,391 for 2013 as  
13 part of its annual DSM progress report. On April 10, 2014, TEP filed an updated calculation, based  
14 on lower kWh savings, resulting in the Performance Incentive being revised downward to \$1,879,095.  
15 Review of this filing indicates that the Performance Incentive was calculated in accordance with  
16 Decision No. 73912.

17           208. TEP is currently projecting a Performance Incentive of approximately \$1 million for  
18 2014. This number may be revised based on actual net benefits and kWh savings for 2014.

19 **DSM Surcharge Reset**

20           209. *Background and Current DSM Surcharge.* The purpose of the DSM Surcharge is to  
21 recover the costs associated with the Company’s energy efficiency programs, including the  
22 Performance Incentive. In the most recent rate case, the Residential DSM Surcharge was set at  
23 \$0.002232 per kWh and the Non-residential DSM Surcharge was set at 2.5479% of total bill (before  
24 RES, LFCR, assessments and taxes). Staff believes that the DSM Surcharge should be reset to reflect  
25 the requested budget, the significantly decreased under-collection, and the potential Freeport  
26 exemption.

27           210. Below are comparisons of the current DSM Surcharge with (i) the updated DSM  
28 Surcharge, with participation by Freeport; and (ii) without participation by Freeport.

Current DSM Surcharge	
Residential	\$0.002232 per kWh
Non-residential	2.5479% of total bill (before RES, LFCR, assessments and taxes)
Reset of DSM Surcharge with participation by Freeport	
Residential	\$0.002149 per kWh
Non-residential	2.399% of total bill (before RES, LFCR, assessments and taxes)
Reset of DSM Surcharge without participation by Freeport	
Residential	\$0.002311 per kWh
Non-residential	2.466% of total bill (before RES, LFCR, assessments and taxes)

211. Below is a table showing estimated Residential bill impacts, based on average kWh use of the current DMS Surcharge, and the DMS Surcharges with and without participation by Freeport.

Residential Usage	kWh/month	Current per-kWh	Monthly Bill Impact	Reset + Freeport	Monthly Impact + Freeport	Reset - Freeport	Monthly Impact - Freeport
Monthly Average	865.25	0.002232	\$1.93	0.002149	\$1.86	0.002311	\$2.00

212. Recommendations Regarding Reset. Staff has recommended that the DSM Surcharge be reset to \$0.002149 per kWh (Residential)/2.399% of total bill, before RES, LFCR, assessments and taxes (Non-residential) if the Commission decides not to approve Freeport's requested exemption from the DSM Surcharge. If the Commission decides to approve Freeport's requested exemption from the DSM Surcharge, Staff has recommended that the DSM Surcharge be reset to \$0.002311 per kWh (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).

#### Staff Recommendations

#### Requested Waiver

213. In accordance with A.A.C. R14-2-2404(B), TEP has requested a waiver of the EE Standard. TEP believes that, based on the current status of its EE Plan, and on other economic factors, it will not be able to meet the EE Standard for 2014 as set forth in A.A.C. R14-2-2404(B). TEP states that, notwithstanding its request for a waiver, it will continue to work toward the maximum cost-effective savings per dollar spent.

1           214. Staff has recommended that TEP be granted a waiver of the Energy Efficiency  
 2 Standard (“EE Standard”) until further Commission action. However, we believe TEP should be  
 3 granted a waiver of the EE Standard for 2014 and 2015 only, to reflect the time period of the  
 4 Implementation Plan under review and consideration by the Commission.

CONCLUSIONS OF LAW

5  
 6           1. TEP is an Arizona public service corporation within the meaning of Article XV,  
 7 Section 2, of the Arizona Constitution.

8           2. The Commission has jurisdiction over TEP and over the subject matter of the  
 9 application.

10           3. The Commission, having reviewed the application and Staff’s Memorandum dated  
 11 October 1, 2014, concludes that it is in the public interest to approve the Plan as discussed herein.

ORDER

Waivers

12  
 13  
 14           IT IS THEREFORE ORDERED that the Energy Efficiency Standard set forth in A.A.C.  
 15 R14-2-2404(B) is waived for Tucson Electric Power Company for 2014 and 2015.

16           IT IS FURTHER ORDERED that A.A.C. R14-2-2404(H) is waived for Tucson Electric  
 17 Power Company, to the extent that Tucson Electric Power Company may count cost-effective energy  
 18 savings from improvements to its facilities and generation systems toward compliance with the Energy  
 19 Efficiency Standard.

20           IT IS FURTHER ORDERED that A.A.C. R14-2-2404(E) is waived for Tucson Electric  
 21 Power Company, to the extent that Tucson Electric Power Company may count up to one third of  
 22 energy efficiency savings from energy efficiency appliance codes toward the Energy Efficiency  
 23 Standard.

24           IT IS FURTHER ORDERED that A.A.C. R14-2-2404(E) is not waived for Tucson Electric  
 25 Power Company to the extent that Tucson Electric Power Company may not count more than one  
 26 third of energy efficiency savings from energy efficiency building or appliance codes toward the  
 27 Energy Efficiency Standard.

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1 Ongoing Cost-Effectiveness

2 IT IS FURTHER ORDERED that if Tucson Electric Power Company finds any  
3 Commission-approved program or measure no longer cost-effective, Tucson Electric Power  
4 Company shall file, in this docket, a letter stating that the program or measure will be discontinued.

5 IT IS FURTHER ORDERED that any measures not found cost-effective by Staff shall be  
6 discontinued, however, Tucson Electric Power Company may continue the four Existing Homes  
7 lower tier duct sealing measures to allow Tucson Electric Power Company to gather additional data  
8 demonstrating cost-effectiveness in the field. These four Existing Homes lower tier duct sealing  
9 measures may be continued as long as field data demonstrates that they are cost-effective, otherwise  
10 Tucson Electric Power Company shall discontinue any of the measures found not to be cost-effective.

11 IT IS FURTHER ORDERED that Tucson Electric Power Company, on or before May 31,  
12 2015, shall file a report in this docket on the savings and cost-effectiveness of the four Existing  
13 Homes lower tier duct sealing measures. The report shall be based on at least twelve months of data  
14 from actual installations and Tucson Electric Power Company shall discontinue any of the four  
15 measures Staff finds non-cost-effective based on Staff's evaluation of this report.

16 Budget

17 IT IS FURTHER ORDERED that Tucson Electric Power Company maintain its budget at  
18 \$18,839,760.

19 Flexibility

20 IT IS FURTHER ORDERED that Tucson Electric Power Company have the flexibility to  
21 move funding between cost-effective programs and measures, with the exception of the Low-income  
22 Weatherization Program, as long as funding is restricted to cost-effective programs and measures and  
23 is divided as evenly as is reasonably possible between Residential and Non-residential customers.

24 IT IS FURTHER ORDERED that Tucson Electric Power Company may, upon providing 30-  
25 day advance notice to the Commission, reduce incentive levels in order to more effectively manage  
26 program spending or respond to market conditions.

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1 Freeport McMoRan Request for Exemption

2 IT IS FURTHER ORDERED that until further order of the Commission, Freeport is  
3 exempted from the DSM surcharge, but not on a company-wide basis. As per the Tucson Electric  
4 Power Company Settlement Agreement, the single location account above 25MW located in Tucson  
5 Electric Power Company's service territory (the Sierrita Mine) shall alone be exempted. Other  
6 Freeport locations in the Tucson Electric Power Company service territory should continue to pay  
7 into the DSM surcharge.

8 IT IS FURTHER ORDERED that the Freeport Sierrita site no longer receive any incentives  
9 from the Tucson Electric Power Company EE portfolio of programs.

10 IT IS FURTHER ORDERED that Freeport shall be required to pay into the Tucson Electric  
11 Power Company DSM bank an amount equal to what it would have paid during the period of its  
12 exemption, along with reasonable interest, should Freeport opt to return to non-exempt status  
13 regarding the Tucson Electric Power Company DSM programs and surcharge.

14 IT IS FURTHER ORDERED that Freeport-McMoRan Copper and Gold's exemption shall  
15 be limited in that Tucson Electric Power Company must continue to obtain and report energy  
16 efficiency activities and savings from Freeport-McMoRan Copper and Gold, Inc., on an annual basis.  
17 Freeport-McMoRan Copper and Gold, Inc., shall provide an annual count of the number and  
18 horsepower of high efficient motors installed at the Sierrita Mine, which operate all mining processes,  
19 and data on any energy efficiency measures/projects which are installed at the Sierrita Mine, sufficient  
20 to enable the calculation of energy savings. Freeport's exemption shall be contingent upon it  
21 providing this information to Tucson Electric Power Company at a time and in a manner such that it  
22 may be included as part of the annual Tucson Electric Power Company DSM report filed by March 1  
23 of each year.

24 IT IS FURTHER ORDERED that Tucson Electric Power Company shall not count  
25 Freeport-McMoRan Copper and Gold's energy savings in determining the Lost Fixed Cost Recovery  
26 amount, nor enable Tucson Electric Power Company to qualify for a performance incentive or  
27 otherwise increase Tucson Electric Power Company's performance incentive amount.

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1 IT IS FURTHER ORDERED that Freeport's energy savings be reported by Tucson Electric  
2 Power Company in its Progress Report filed in March of each year.

3 IT IS FURTHER ORDERED that that when Tucson Electric Power Company files its next  
4 EE Implementation Plan or by October 1, 2015, whichever is sooner, Tucson Electric Power  
5 Company report what its budget and DSM surcharge would be had Freeport not been exempted.

6 Request for Commercial Cross-Program Eligibility

7 IT IS FURTHER ORDERED that Tucson Electric Company's request that it be allowed to  
8 offer all commercial measures to all customers participating in any commercial program is hereby  
9 denied.

10 Programs and Measures

11 IT IS FURTHER ORDERED that none of the measures listed under "Discontinued  
12 Measures" are approved as part of Tucson Electric Power Company's EE portfolio.

13 IT IS FURTHER ORDERED that the Efficient Products Program remain in effect with the  
14 existing cost-effective measure (CFLs) in place, and that the proposed new measures found cost  
15 effective by Staff and approved previously by the Commission for other utility customers are  
16 approved.

17 IT IS FURTHER ORDERED that the proposed new Appliance Recycling Program is  
18 approved at this time.

19 IT IS FURTHER ORDERED that the existing Residential New Construction Program  
20 remain in effect until further Commission order.

21 IT IS FURTHER ORDERED that the existing Existing Homes Program remain in effect  
22 until further Commission order.

23 IT IS FURTHER ORDERED that the existing Shade Tree Program remain in effect until  
24 further order of the Commission.

25 IT IS FURTHER ORDERED that the existing Low-Income Weatherization Program remain  
26 in effect until further order of the Commission.

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1 IT IS FURTHER ORDERED that eligibility for participating in the Low-Income  
2 Weatherization Program be changed from 150% of the Federal Poverty Level to 200% of the Federal  
3 Poverty Level.

4 IT IS FURTHER ORDERED that the proposed new Multi-Family Housing Efficiency  
5 Program is approved.

6 IT IS FURTHER ORDERED that the Consumer Education and Outreach Program remain  
7 in effect, but that it be analyzed in accordance with A.A.C. R14-2-2410(F) and that this information be  
8 provided in the progress reports filed in compliance with the Energy Efficiency Rules.

9 IT IS FURTHER ORDERED that the Energy Codes and Standards Program be approved.

10 IT IS FURTHER ORDERED that the Conservation Voltage Reduction Program be  
11 approved, but that there be no recovery for this program through the DSM Surcharge.

12 IT IS FURTHER ORDERED that the Generation Improvement and Facilities Upgrade  
13 Program be approved, but that there be no recovery for this program through the DSM Surcharge.

14 IT IS FURTHER ORDERED that Tucson Electric Power Company may count cost effective  
15 energy savings from improvements to Tucson Electric Power Company facilities and generation  
16 systems toward compliance with the energy efficiency standard. Specific programs including  
17 anticipated costs and energy savings must be proposed and approved through the implementation  
18 plan process. Any energy savings from improvements to Tucson Electric Power Company's facilities  
19 and generation systems shall not increase the LFCR, enable Tucson Electric Power Company to  
20 qualify for a performance incentive, or otherwise increase the performance incentive amount.

21 IT IS FURTHER ORDERED that the DSM Surcharge be reset to \$0.002311 per kWh  
22 (Residential)/2.466% of total bill, before RES, LFCR, assessments and taxes (Non-residential).

23 IT IS FURTHER ORDERED that the C&I Direct Load Control Program remain in effect  
24 until further Commission order.

25 IT IS FURTHER ORDERED that the C&I Comprehensive Program remain in effect until  
26 further Commission order. Cost-effective existing measures listed in Appendix 1-A, including the 18  
27 SEER Packed and Split AC measure, shall continue, while any non-cost-effective existing measures

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1 shall be discontinued. New measures found cost effective by Staff for TEP and approved previously  
2 by the Commission for other utility customers are approved for the C&I Comprehensive Program.

3 IT IS FURTHER ORDERED that the Bid for Efficiency Program is approved.

4 IT IS FURTHER ORDERED that the Retro-Commissioning Program is approved.

5 IT IS FURTHER ORDERED that the Small Business Direct Install Program remain in effect  
6 until further Commission order and that schools are eligible to participate in the Program to the extent  
7 that such participation would be cost-effective. (see Appendix 1-A)

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1 IT IS FURTHER ORDERED that the Combined Heat and Power Program is approved and  
2 that Tucson Electric Power Company will prioritize funding for this program as necessary to meet  
3 customer demand.

4 IT IS FURTHER ORDERED that Tucson Electric Power Company is allowed to count  
5 toward the Energy Efficiency Standard any savings arising from CHP projects in its service territory  
6 that conform to the requirements of the Energy Efficiency Rules.

7 IT IS FURTHER ORDERED that this Order is effective immediately.

8  
9 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

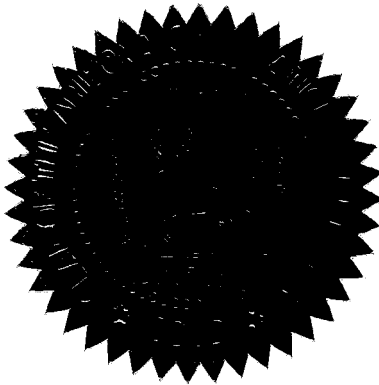
10   
11 CHAIRMAN

10   
11 COMMISSIONER

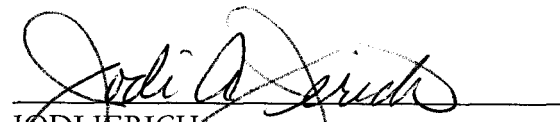
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14 COMMISSIONER

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14 COMMISSIONER

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14 COMMISSIONER



IN WITNESS WHEREOF, I, JODI JERICH, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this 31<sup>st</sup> day of December, 2014.

20   
21 JODI JERICH  
22 EXECUTIVE DIRECTOR

23 DISSENT: \_\_\_\_\_

24 DISSENT: \_\_\_\_\_

25 SMO:JMK:sms\RRM  
26  
27  
28

1 SERVICE LIST FOR: TUCSON ELECTRIC POWER COMPANY  
2 DOCKET NO. E-01933A-13-0183

3 Michael Patten  
4 Roshka DeWulf & Patten, PLC  
5 One Arizona Center  
6 400 East Van Buren, Ste. 800  
7 Phoenix, Arizona 85004

8 Mr. Steven M. Olea  
9 Director, Utilities Division  
10 Arizona Corporation Commission  
11 1200 West Washington Street  
12 Phoenix, Arizona 85007

13 Ms. Janice M. Alward  
14 Chief Counsel, Legal Division  
15 Arizona Corporation Commission  
16 1200 West Washington Street  
17 Phoenix, Arizona 85007  
18  
19  
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## APPENDIX 1-A (Existing)

Programs and Measures	Status	Staff's Benefit-Cost Ratio	Total Incentives
Behavioral Comprehensive (formerly Consumer Education)			
K-12 Education Kit	Proposed	2.57	\$134,000
Community Education Kit	Proposed	2.16	\$13,500
C&I Comprehensive Program			
14 SEER Packaged and Split AC's	Existing	1.21	\$2,013
14 SEER Packaged and Split HP's	Existing	2.11	\$2,013
15 SEER Packaged and Split AC's	Existing	1.14	\$4,125
15 SEER Packaged and Split HP's	Existing	2.09	\$4,125
16 SEER Packaged and Split AC's	Existing	1.08	\$3,510
16 SEER Packaged and Split HP's	Existing	1.97	\$3,495
17 SEER Packaged and Split AC's	Existing	1.00	\$2,125
17 SEER Packaged and Split HP's	Existing	1.88	\$2,125
18 SEER Packaged and Split AC's	Existing	0.96	\$2,498
18 SEER Packaged and Split HP's	Existing	1.82	\$2,498
Air Cooled Chillers < 150 tons	Existing	2.13	\$15,000
Air Cooled Chillers > 150 tons	Existing	2.13	\$17,625
Anti sweat heater controls	Existing	2.23	\$7,200
Custom Measures	Existing	1.86	\$506,385
Daylighting controls	Existing	1.11	\$1,800
Delamping	Existing	4.92	\$38,250
EER Rated Packaged AC (< 5 tons ,11.36 EER)	Existing	1.24	\$1,000
EER Rated Packaged AC (> 20tons ,10.9 EER)	Existing	1.24	\$14,000
EER Rated Packaged AC (11.5 - 20 tons ,11.24 EER)	Existing	1.24	\$9,198
EER Rated Packaged AC (5.4 - 11.25 tons ,11.36 EER)	Existing	1.24	\$18,720
EER Rated Packaged HP (< 5 tons ,11.36 EER)	Existing	1.38	\$1,000
EER Rated Packaged HP (> 20 tons ,11.11 EER)	Existing	1.27	\$19,500
EER Rated Packaged HP (11.25 - 20 tons ,11.02 EER)	Existing	1.38	\$6,699
EER Rated Packaged HP (5.4 - 11.25 tons ,11.31 EER)	Existing	1.38	\$24,375
Energy efficient exit signs	Existing	1.52	\$11,250
Energy efficient ODP motors	Existing	3.25	\$2,000
Energy Efficient TEFC Motors	Existing	1.19	\$2,000
HIDs to T8/T5 - Exterior	Existing	3.30	\$26,250
HIDs to T8/T5 - Interior	Existing	3.25	\$153,000
High Efficiency Evaporator Fan Motors (PSC)	Existing	2.42	\$113
High Efficiency Evaporator Fan Motors (ECM)	Existing	1.97	\$2,813
High Efficiency Ice Makers	Existing	0.75	\$510
High Efficiency Reach-in Refrigerators and Freezers	Existing	2.21	\$9,375
Integral Screw In CFL	Existing	1.75	\$3,500
Hard Wire CFL	Existing	1.28	\$2,625
Occupancy sensors	Existing	1.44	\$50,000
Premium T8 Lighting	Existing	1.24	\$60,000
Programmable Thermostats	Existing	4.60	\$5,000
Screw in cold cathode CFL	Existing	2.35	\$35
Reach-In Cooler Controls ("Cool miser")	Existing	2.01	\$1,125
Standard T8 Lighting	Existing	0.74	\$22,500
Strip Curtains	Existing	3.79	\$250
Variable Speed Drives	Existing	2.42	\$213,300
Variable Speed Screw Compressor	Existing	0.85	\$9,800
Water Cooled Chillers - Centrifugal < 150 tons	Existing	1.21	\$30,493
Water Cooled Chillers - Centrifugal > 300 tons	Existing	1.21	\$100,493

Water Cooled Chillers - Centrifugal 151 - 299 tons	Existing	1.21	\$53,087
Water Cooled Chillers - Reciprocating All Sizes	Existing	6.72	\$27,750
Water Cooled Chillers - Screw < 150 tons	Existing	2.01	\$1,452
Water Cooled Chillers - Screw > 300 tons	Existing	1.84	\$14,414
Water Cooled Chillers - Screw 151 - 299 tons	Existing	2.03	\$5,211
<b>Commercial Direct Load Control</b>			
Direct Load Control for Large Commercial	Existing	3.40	\$2
<b>Commercial New Construction</b>			
Design Assistance Incentives to Design teams	Existing	No savings assigned	\$0
EER Rated Packaged AC (> 20tons ,10.9 EER)	Existing	1.64	\$56,000
EER Rated Packaged AC (11.5 - 20 tons ,11.24 EER)	Existing	0.92	\$17,174
EER Rated Packaged AC (5.4 - 11.25 tons ,11.36 EER)	Existing	1.64	\$9,600
High Perf Glazing	Existing	1.00	\$510
Performance Rebates	Existing	5.31	\$187,200
<b>Efficient Products</b>			
ES Integral CFL	Existing	4.82	\$1,683,545
<b>Existing Homes and Audit Direct Install</b>			
DTR $\geq$ 14% Reduction leakage (All electric)	Existing	0.97	\$11,250
DTR $\geq$ 14% Reduction leakage (Dual fuel)	Existing	0.91	\$17,500
DTR $\geq$ 50% Reduction leakage (All electric)	Existing	1.59	\$112,500
DTR $\geq$ 50% Reduction leakage (Dual fuel)	Existing	1.73	\$67,500
ER HVAC_QI_DTR $\geq$ 14% Reduction leakage (All electric)	Existing	1.00	\$39,025
ER HVAC_QI_DTR $\geq$ 14% Reduction leakage (Dual fuel)	Existing	1.23	\$83,625
ER HVAC_QI_DTR $\geq$ 50% Reduction leakage (All electric)	Existing	1.33	\$197,250
ER HVAC_QI_DTR $\geq$ 50% Reduction leakage (Dual fuel)	Existing	1.62	\$328,750
ER HVAC with QI (All electric)	Existing	1.27	\$217,500
ER HVAC with QI (Dual fuel)	Existing	1.27	\$261,000
HVAC_QI_DTR $\geq$ 14% Reduction leakage (All electric)	Existing	0.82	\$21,420
HVAC_QI_DTR $\geq$ 14% Reduction leakage (Dual fuel)	Existing	0.87	\$34,425
HVAC_QI_DTR $\geq$ 50% Reduction leakage (All electric)	Existing	1.20	\$144,750
HVAC_QI_DTR $\geq$ 50% Reduction leakage (Dual fuel)	Existing	1.38	\$193,000
HVAC/QI (All electric)	Existing	1.01	\$77,250
HVAC/QI (Dual fuel)	Existing	1.04	\$154,500
Screw in CFL - Direct Install from Audit	Existing	2.66	\$90,000
Behavioral changes resulting from Energy Assessments	Existing	1.64	\$116,000
<b>Home Energy Report Program</b>			
Home Energy Reports	Existing	1.56	\$0
<b>Low Income Weatherization</b>			
Low Income Weatherization	Existing	1.22	\$232,800
<b>Residential New Construction Program</b>			
ENERGY Smart Homes (All Electric)	Existing	1.61	\$525,000
ENERGY Smart Homes (Dual Fuel)	Existing	2.26	\$525,000
<b>Shade Trees Program</b>			
Shade Tree	Existing	1.34	\$150,500
<b>Small Business Direct Install</b>			
14 SEER Packaged and Split AC's	Existing	1.13	\$1,131
14 SEER Packaged and Split HP's	Existing	1.85	\$2,263
15 SEER Packaged and Split AC's	Existing	1.07	\$188,263
15 SEER Packaged and Split HP's	Existing	1.83	\$4,525
16 SEER Packaged and Split AC's	Existing	1.07	\$5,775
16 SEER Packaged and Split HP's	Existing	1.74	\$5,775
Anti sweat heater controls	Existing	1.87	\$30,745

Daylighting controls	Existing	1.01	\$3,422
Delamping	Existing	1.03	\$188,263
Energy efficient exit signs	Existing	1.33	\$5,989
Evaporative fan controls	Existing	1.01	\$19,517
Hard Wire CFL	Existing	1.04	\$10,624
HIDs to T8/T5 - Exterior	Existing	2.47	\$34,039
HIDs to T8/T5 - Interior	Existing	2.42	\$39,667
High Efficiency Evaporator Fan Motors (ECM)	Existing	1.68	\$14,221
High Efficiency Evaporator Fan Motors (PSC)	Existing	1.99	\$1,032
Integral Screw In CFL	Existing	1.37	\$44,935
Occupancy sensors	Existing	1.30	\$16,562
Programmable Thermostats	Existing	3.38	\$179,221
Screw in cold cathode CFL	Existing	0.97	\$607
Standard T8 Lighting	Existing	0.55	\$39,112
Strip Curtains	Existing	2.85	\$1,494
Variable Speed Drives	Existing	2.04	\$36,209

## APPENDIX 1-B (Proposed)

Programs and Measures	Status	Staff's Benefit-Cost Ratio	Total Incentives
Appliance Recycling Program			
Freezer Recycling	Proposed	2.27	\$9,000
Refrigerator Recycling	Proposed	2.27	\$81,000
Behavioral Comprehensive			
CFL Outreach Promotion (13W CFLs)	Proposed	1.85	\$49,200
Direct Canvassing Kit	Proposed	1.88	\$24,600
Bid for Efficiency Program			
Bid for Efficiency	Proposed	1.52	\$60,000
C&I Comprehensive Program			
Advanced Power Strips - Occupancy Sensors	Proposed	1.02	\$750
Advanced Power Strips - Timer Plug Strip	Proposed	3.05	\$750
Advanced Power Strips - Load Sensor	Proposed	1.31	\$750
Beverage Ctrls ("vending miser")	Proposed	2.50	\$10,000
CO Sensors	Proposed	3.28	\$5,000
CO2 Sensors	Proposed	1.03	\$4,000
Coin Operated Washers Advanced (Proposed)	Proposed	1.79	\$0
Coin Operated Washers (Proposed)	Proposed	2.70	\$6,250
Coin Operated Washers (Proposed)	Proposed	2.40	\$6,250
Coin Operated Washers (Proposed)	Proposed	2.78	\$6,250
Cooling Tower Subcooling	Proposed	0.77	\$1,000
Economizers	Proposed	4.95	\$200
Efficient Compressors	Proposed	2.77	\$240
Efficient Condensers	Proposed	1.90	\$60
EMS - Lighting Schedule	Proposed	0.84	\$5,000
EMS - HVAC and Cold Deck Reset	Proposed	1.33	\$78
Floating Head Pressure Controls	Proposed	4.72	\$400
Green Motor Rewind	Proposed	1.00	\$13
Heat Pump Water Heaters - Tier 1	Proposed	1.53	\$2,400
Heat Pump Water Heaters - Tier 2	Proposed	1.15	\$0
Evaporative fan controls	Proposed	1.11	\$750
High Perf Glazing	Proposed	0.97	\$38
HVAC System Test and Repair	Proposed	1.57	\$9,022
Variable Refrigerant Flow	Proposed	2.09	\$500
Hotel Room HVAC Control	Proposed	1.62	\$2,500
Induction Lighting	Proposed	1.15	\$140,560
LED Channel Signs	Proposed	0.78	\$38
LED Indoor Lights	Proposed	1.08	\$6,000
LED Traffic Lights	Proposed	1.19	\$2,500
Refrigeration LED Strip Lighting	Proposed	1.44	\$1,375
Canopy LED Lighting	Proposed	1.29	\$30,000
Computer Power Monitoring System	Proposed	1.92	\$16,000
Pulse Start Metal Halide - Interior	Proposed	1.01	\$7,500
Pulse Start Metal Halide - Exterior	Proposed	1.08	\$6,750
Outdoor CFL	Proposed	4.93	\$438
PTAC	Proposed	10.85	\$42
PTHP	Proposed	6.52	\$438
Refrigerated Display Automatic Door Closers	Proposed	2.91	\$400
Refrigerated Display Gaskets	Proposed	0.88	\$60
Shade Screens	Proposed	1.66	\$4,000
Snack Ctrls ("vending miser")	Proposed	1.17	\$33,750

Window Films	Proposed	1.59	\$123
Combined Heat and Power Program			
Combined Heat and Power-Pilot	Proposed	6.66	\$0
Code Support			
Residential NC - Codes and Standards Support	Proposed	TBD	\$0
Motors - Codes and Standards Support	Proposed	TBD	\$0
General Service CFL's - Codes and Standards Support	Proposed	TBD	\$0
T-8's - Codes and Standards Support	Proposed	TBD	\$0
Conservation Voltage Reduction			
DREX 34	Proposed	3.74	\$0
DREX 35	Proposed	2.30	\$0
DREX 36	Proposed	3.93	\$0
DREX 44	Proposed	3.78	\$0
Efficient Products			
Advanced Power Strips - Load Sensor	Proposed	1.03	\$1,500
Pool Pump Timers	Proposed	2.28	\$0
Residential LED light	Proposed	1.44	\$22,120
Residential 2x Incandescent	Proposed	1.20	\$0
Heat Pump Water Heater - Residential	Proposed	0.87	\$0
ENERGY STAR Ceiling Fan	Proposed	1.12	\$3,000
ENERGY STAR Freezer	Proposed	1.88	\$250
ENERGY STAR Central Air Conditioner	Proposed	2.35	\$45,000
ENERGY STAR Clothes Washer	Proposed	1.17	\$20,000
ENERGY STAR Dishwasher	Proposed	3.23	\$1,500
ENERGY STAR Refrigerator	Proposed	1.44	\$2,019
ENERGY STAR Room Air Conditioner	Proposed	1.30	\$2,625
Water Heater Blanket	Proposed	2.45	\$1,100
Variable Spd Pool Pump	Proposed	1.23	\$50,000
Generation and Facilities Improvement Program			
Generation and Facilities Improvement	Proposed		\$0
Multi-Family Program			
ES Integral CFL	Proposed	2.23	\$13,032
Low Flow Showerheads - Electric WH only	Proposed	2.74	\$5,800
Faucet Aerators - Electric WH only	Proposed	3.67	\$1,936
Retro-Commissioning Program			
Retro-Commissioning	Proposed	2.46	\$88,000
Schools Facilities Program			
14 SEER Packaged and Split AC's	Proposed	1.08	\$2,190
14 SEER Packaged and Split HP's	Proposed	1.84	\$2,190
15 SEER Packaged and Split AC's	Proposed	1.02	\$4,388
15 SEER Packaged and Split HP's	Proposed	1.82	\$4,388
16 SEER Packaged and Split AC's	Proposed	0.96	\$6,596
16 SEER Packaged and Split HP's	Proposed	1.58	\$6,596
Advanced Power Strips - Timer Plug Strip	Proposed	2.67	\$1,291
Advanced Power Strips - Load Sensor	Proposed	1.25	\$714
Advanced Power Strips - Occupancy Sensors	Proposed	0.86	\$1,033
Beverage Ctrls ("vending miser")	Proposed	2.19	\$10,868
Custom Measures	Proposed	2.37	\$17,110
Daylighting controls	Proposed	1.07	\$24,639
Delamping	Proposed	4.12	\$15,248
Energy efficient exit signs	Proposed	1.41	\$3,881
Hard Wire CFL	Proposed	1.26	\$19,080



HIDs to T8/T5 - Exterior	Proposed	2.70	\$36,763
HIDs to T8/T5 - Interior	Proposed	2.84	\$34,037
Induction Lighting	Proposed	1.45	\$1,524
Integral Screw In CFL	Proposed	1.68	\$4,035
LED Indoor Lights	Proposed	1.05	\$547
Occupancy sensors	Proposed	1.50	\$4,673
Outdoor CFL	Proposed	3.31	\$25,759
Premium T8 Lighting	Proposed	1.24	\$4,823
Programmable Thermostats	Proposed	2.71	\$191,965
Reach-in Cooler Controls ("vending miser")	Proposed	1.80	\$1,620
Reduced LPD	Proposed	1.09	\$1,408
Screw in cold cathode CFL	Proposed	2.18	\$2,622
Shade Screens	Proposed	1.47	\$106
Snack Ctrl ("Vending Miser")	Proposed	1.09	\$2,174
Standard T8 Lighting	Proposed	0.74	\$2,647
T8 to T8	Proposed	0.84	\$0
Variable Speed Drives	Proposed	2.10	\$78,029
Window Films	Proposed	1.64	\$42
Small Business Direct Install			
Advanced Power Strips - Occupancy Sensors	Proposed	0.82	\$213
Advanced Power Strips - Timer Plug Strip	Proposed	2.40	\$266
Advanced Power Strips - Load Sensor	Proposed	1.18	\$147
Beverage Ctrl ("vending miser")	Proposed	2.06	\$10,063
Induction Lighting	Proposed	1.03	\$2,824
LED Channel Signs	Proposed	0.75	\$308
LED Indoor Lights	Proposed	1.02	\$4,053
Outdoor CFL	Proposed	2.91	\$47,701
Premium T8 Lighting	Proposed	1.32	\$75,844
Reach-in Cooler Controls ("vending miser")	Proposed	1.71	\$3,750
Reduced LPD	Proposed	1.01	\$4,981
Refrigerated Display Automatic Door Closers	Proposed	2.32	\$11,047
Refrigerated Display Gaskets	Proposed	0.82	\$325
Shade Screens	Proposed	1.51	\$49
Snack Ctrl ("vending miser")	Proposed	1.07	\$1,006
Window Films	Proposed	1.68	\$29

Appendix 2, Measure Detail Description

Program Name	Measure Name	Description
Appliance Recycling	Freezer Recycling	Recycling of Freezers
Appliance Recycling	Refrigerator Recycling	Recycling of Refrigerators
Behavioral Comprehensive Program	CFL Outreach Promotion (13W CFLs)	Distribution of multiple CFLs in multiple sizes (average 13 W) at events, home shows, etc.
Behavioral Comprehensive Program	Community Education Kit	Distribution of kit including two 13 Watt CFLs, one bathroom aerator, one showerhead and one LED nite-lite at educational events
Behavioral Comprehensive Program	Direct Canvasing Kit	Distribution of two 13 W CFLs to each home during neighborhood canvasing
Behavioral Comprehensive Program	In Home Energy Display Pilot	This was a pilot residential direct load control project. Pilot ended and is no longer offered.
Behavioral Comprehensive Program	K-12 Education Kit	Student take home kits include one 18 Watt CFL, two 13 Watt CFL, one bathroom aerator, one low-flow shower head and one LED nite-lite.
Bid for Efficiency - Pilot	Bid for Efficiency	Commercial projects where customers submit bids to TEP on energy saving retro-fits and TEP grants the bid for incentive based on cost, savings, and timing of projects.
C&I Comprehensive Program	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	17 SEER Packaged and Split AC's	17 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	17 SEER Packaged and Split HP's	17 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	18 SEER Packaged and Split AC's	18 SEER packaged and split system air conditioners installed in commercial buildings.
C&I Comprehensive Program	18 SEER Packaged and Split HP's	18 SEER packaged and split system heat pumps installed in commercial buildings.
C&I Comprehensive Program	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued..
C&I Comprehensive Program	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with timer control.
C&I Comprehensive Program	Advanced Power Strips - Load Sensor	Advanced Power Strips with load sensor control.
C&I Comprehensive Program	Air Cooled Chillers < 150 tons	Install more efficient air cooled chillers units less than 150 tons
C&I Comprehensive Program	Air Cooled Chillers > 150 tons	Install more efficient air cooled chillers greater than 150 tons
C&I Comprehensive Program	Anti sweat heater controls	Anti Sweat heater controls cycle door heaters on and off to control condensation rather than having door heaters on all the time.
C&I Comprehensive Program	Beverage Ctrl's ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
C&I Comprehensive Program	CO Sensors	Carbon monoxide sensors that measure the amount of carbon monoxide in high occupancy areas

		and cycle ventilation systems on and off based on need.	
C&I Comprehensive Program	CO2 Sensors	Carbon dioxide sensors that measure the amount of carbon dioxide in high occupancy areas and cycle ventilation systems on and off based on need.	
C&I Comprehensive Program	Coin Operated Washers Advanced (Proposed)	CEE Advanced Tier Energy Star with Modified Energy Factor 2.6	
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 1/Energy Star with Modified Energy Factor 2.0	
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 2/Energy Star with Modified Energy Factor 2.2	
C&I Comprehensive Program	Coin Operated Washers (Proposed)	CEE Tier 3/Energy Star with Modified Energy Factor 2.4	
C&I Comprehensive Program	Cooling Tower Subcooling	Refrigerant Sub Cooling is a reliable energy-saving alternative to increasing the cooling capacity of air-conditioning systems, refrigeration systems, and most anything that uses refrigerant. These units reduce the condenser energy consumption.	
C&I Comprehensive Program	Custom Measures	EE measures chosen by a customer and contractor to reduce energy in a commercial facility that are not prescriptive measures. Each project includes detailed cost-effectiveness test (SCT) that must exceed 1.0.	
C&I Comprehensive Program	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.	
C&I Comprehensive Program	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.	
C&I Comprehensive Program	Economizers	Controls installed on commercial HVAC to allow use of outside air when conditions are right to replace use of mechanical refrigeration.	
C&I Comprehensive Program	EER Rated Packaged AC (< 5 tons, 11.36 EER)	Installation of high-efficiency EER Rated (3-Phase) air conditioners and heat pumps which exceed the minimum federal efficiency standard. Decision No. 70403 (7/3/2008) approved these measures.	
C&I Comprehensive Program	EER Rated Packaged AC (> 20tons, 10.9 EER)		
C&I Comprehensive Program	EER Rated Packaged AC (11.5 - 20 tons, 11.24 EER)		
C&I Comprehensive Program	EER Rated Packaged AC (5.4 - 11.25 tons, 11.36 EER)		
C&I Comprehensive Program	EER Rated Packaged HP (< 5 tons, 11.36 EER)		
C&I Comprehensive Program	EER Rated Packaged HP (> 20 tons, 11.11 EER)		
C&I Comprehensive Program	EER Rated Packaged HP (11.25 - 20 tons, 11.02 EER)		
C&I Comprehensive Program	EER Rated Packaged HP (5.4 - 11.25 tons, 11.31 EER)		
C&I Comprehensive Program	Efficient Compressors		Installation of high efficiency compressors for refrigeration units.
C&I Comprehensive Program	Efficient Condensers		Installation of high efficiency condensers for refrigeration units.
C&I Comprehensive Program	EMS - Lighting Schedule	Installation of Lighting Energy Management Systems to control lighting operation in a large facility.	
C&I Comprehensive Program	EMS - HVAC and Cold Deck Reset	Replacement of thermostats or pneumatic controls to maximize savings from installation of EMS	

C&I Comprehensive Program	lighting energy management system.
C&I Comprehensive Program	Installation of CFL, LED or Electroluminescent exit signs.
C&I Comprehensive Program	Installation of high efficiency Open Drip-proof motors
C&I Comprehensive Program	Installation of high efficiency Totally Enclosed Fan Cooled motors
C&I Comprehensive Program	Floating head pressure control minimizes compressor operation in refrigeration equipment by lowering condensing temperatures.
C&I Comprehensive Program	Promoting the Green Motor Rewind to bring old motors back to their original efficiency during a re-wind rather than accepting a lesser re-wind option that results in up to a 7% drop in efficiency.
C&I Comprehensive Program	This measure promotes installation of Heat Pump Water heaters with 2.35 COP
C&I Comprehensive Program	This measure promotes installation of Heat Pump Water heaters with 2.51 COP.
C&I Comprehensive Program	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
C&I Comprehensive Program	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.
C&I Comprehensive Program	Installation of high efficiency permanent split capacitor motors.
C&I Comprehensive Program	Installation of high efficiency electronically communicated motors
C&I Comprehensive Program	Installation of controls to cycle evaporative fans on and off based on load in commercial walk-in refrigerators and freezers.
C&I Comprehensive Program	Installation of high efficiency ice makers to replace standard efficiency units in commercial applications.
C&I Comprehensive Program	Installation of high efficiency reach-in refrigerators and freezers to replace standard efficiency units in commercial applications.
C&I Comprehensive Program	Installation of high-performance Low-E window systems in commercial applications.
C&I Comprehensive Program	Promoting the quality installation of HVAC Systems to assure systems operate at rated efficiency.
C&I Comprehensive Program	Installation of variable refrigerant flow systems which vary HVAC capacity based on actual load.
C&I Comprehensive Program	Installation of controls on hotel room HVAC to turn systems off or adjust temperature when the room is unoccupied.
C&I Comprehensive Program	High Efficiency Lighting retro-fit for hard to reach areas where long life is desirable.
C&I Comprehensive Program	High Efficiency Lighting retrofit to replace incandescent lamps.
C&I Comprehensive Program	High Efficiency Lighting retrofit to replace incandescent lamps.
C&I Comprehensive Program	Installation of LED Channel signs to replace incandescent or fluorescent lamps.
C&I Comprehensive Program	Installation of LED to replace incandescent or fluorescent lamps
C&I Comprehensive Program	Installation of LED to replace incandescent or fluorescent lamps in pedestrian signals. Not cost-effective and will not be offered at this time.

C&I Comprehensive Program	LED Street and Parking Lights	Installation of LED to replace incandescent or fluorescent lamps in Street and parking lights. Measure is not cost-effective and will not be offered at this time.
C&I Comprehensive Program	LED Traffic Lights	Installation of LED to replace incandescent or fluorescent lamps in Traffic lights
C&I Comprehensive Program	Bi-Level Lighting	Installing lighting systems capable of providing multiple lighting levels. Measure is not cost effective and will not be offered at this time.
C&I Comprehensive Program	Refrigeration LED Strip Lighting	Installing LED strip lighting to replace fluorescent in refrigerated cases
C&I Comprehensive Program	Canopy LED Lighting	Installing LED lighting to replace fluorescent or HID in canopy fixtures
C&I Comprehensive Program	Computer Power Monitoring System	Installing controls to vary use of computers and corresponding equipment during unoccupied hours.
C&I Comprehensive Program	Pulse Start Metal Halide - Interior	Installing metal halide lamps with electronic starting currents or Pulse Start.
C&I Comprehensive Program	Pulse Start Metal Halide - Exterior	Installing metal halide lamps with electronic starting currents or Pulse Start.
C&I Comprehensive Program	Night Covers	Installation of covers over open refrigerated cases at night to maintain temperature in case. This measure is not cost-effective and will not be offered in TEP's program.
C&I Comprehensive Program	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
C&I Comprehensive Program	Outdoor CFL	Installation of CFLs in outdoor applications
C&I Comprehensive Program	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
C&I Comprehensive Program	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day. This is a good measure because costs are low and savings are high.
C&I Comprehensive Program	PTAC	Installation of packaged-terminal air conditioners that exceed the federal minimum standard efficiency. These units are used in hotels, resorts, hospitals, etc.
C&I Comprehensive Program	PTHP	Installation of packaged-terminal heat pumps that exceed the federal minimum standard efficiency. These units are used in hotels, resorts, hospitals, etc.
C&I Comprehensive Program	Refrigerated Display Automatic Door Closers	Installing automatic door closers on refrigerated display case doors.
C&I Comprehensive Program	Refrigerated Display Gaskets	Installing new gaskets on refrigerated display case doors.
C&I Comprehensive Program	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
C&I Comprehensive Program	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
C&I Comprehensive Program	Snack Ctrl's ("vending miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
C&I Comprehensive Program	Reach-In Cooler Controls ("Cool miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
C&I Comprehensive Program	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
C&I Comprehensive Program	Strip Curtains	Installing strip curtains to doors in walk-in refrigerators and freezers
C&I Comprehensive Program	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. This measure is not cost-effective and will not be offered in TEP's.
C&I Comprehensive Program	Variable Speed Drives	Installing variable speed drives to vary energy use for motors based on actual load.
C&I Comprehensive Program	Variable Speed Screw Compressor	Installing variable speed air compressors to reduce energy use.
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal <	Install more efficient water cooled centrifugal chillers less than 150 tons

C&I Comprehensive Program	150 tons	Water Cooled Chillers - Centrifugal > 300 tons	Install more efficient water cooled centrifugal chillers greater than 300 tons
C&I Comprehensive Program		Water Cooled Chillers - Centrifugal 151 - 299 tons	Install more efficient water cooled centrifugal chillers between 151 and 299 tons
C&I Comprehensive Program		Water Cooled Chillers - Reciprocating All Sizes	Install more efficient water cooled reciprocating chillers.
C&I Comprehensive Program		Water Cooled Chillers - Screw < 150 tons	Install more efficient water cooled screw chillers less than 150 tons
C&I Comprehensive Program		Water Cooled Chillers - Screw > 300 tons	Install more efficient water cooled screw chillers greater than 300 tons
C&I Comprehensive Program		Water Cooled Chillers - Screw 151 - 299 tons	Install more efficient water cooled screw chillers between 151 and 299 tons
C&I Comprehensive Program		Window Films	Install window film to reduce heat entering glass from direct sunlight
CHIP Joint Program - Pilot		Combined Heat and Power	Promote option of installing system to use waste heat from other gas measures for electrical power production.
Codes Support		Residential NC - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher construction standards for commercial facilities.
Codes Support		Motors - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher construction standards in motors.
Codes Support		General Service CFL's - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher efficiency standards for CFL's.
Codes Support		T-8's - Codes and Standards Support	Energy credit allowed in EE Plan resulting from work to promote higher efficiency standards for fluorescent lamps.
Conservation Voltage Reduction		DREX 34	Initiate voltage reduction protocol at Drexel substation on feeder 34
Conservation Voltage Reduction		DREX 35	Initiate voltage reduction protocol at Drexel substation on feeder 35
Conservation Voltage Reduction		DREX 36	Initiate voltage reduction protocol at Drexel substation on feeder 36
Conservation Voltage Reduction		DREX 44	Initiate voltage reduction protocol at Drexel substation on feeder 44
Commercial Direct Load Control		Direct Load Control for Large Commercial	Promote direct load control for large commercial customers as a guaranteed capacity contract.
Commercial New Construction		Design Assistance Incentives to Design teams	Provide incentive to engineering firms completing design of new commercial buildings to encourage them to evaluate both standard code-built facilities and an energy efficient option.
Commercial New Construction		EER Rated Packaged AC (> 20tons, 10.9 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction		EER Rated Packaged AC (11.5 - 20 tons, 11.24 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction		EER Rated Packaged AC (5.4 - 11.25 tons, 11.36 EER)	Install more efficient EER Rated (3-phase) packaged AC in commercial new construction as part of the overall design.
Commercial New Construction		High Perf Glazing	Install energy efficient low-e glass systems in commercial new construction as part of the overall design.

Commercial New Construction	Performance Rebates	Pay incentives for the energy efficient design of a commercial facility including envelope, windows, lighting, motors, and hvac. Detailed energy simulations must be submitted showing a standard design versus the energy efficient design and inspections are completed to verify installation of EE equipment.
Efficient Products	Advanced Power Strips - Load Sensor	Install advanced power strips-load sensors for control of electronics in residential application.
Efficient Products	ES Integral CFL	Install CFL lamps to replace incandescent.
Efficient Products	Pool Pump Timers	Install timers to control operation of pool pump.
Efficient Products	Residential LED light	Install energy efficient LED lamps to replace incandescent lamps.
Efficient Products	Residential 2x Incandescent	Install 2x incandescent lamps to replace standard incandescent lamps.
Efficient Products	Heat Pump Water Heater - Residential	Install heat pump water heater with 2.35 COP to replace standard electric units.
Efficient Products	ENERGY STAR Ceiling Fan	Install energy efficient Energy Star Rated ceiling fan to replace standard units.
Efficient Products	ENERGY STAR Freezer	Install energy efficient Energy Star Rated Freezer to replace standard units.
Efficient Products	ENERGY STAR Central Air Conditioner	Install energy efficient Energy Star Rated central air conditioner to replace standard units.
Efficient Products	ENERGY STAR Clothes Washer	Install energy efficient Energy Star Rated clothes washer to replace standard units.
Efficient Products	ENERGY STAR Dishwasher	Install energy efficient Energy Star Rated dishwasher to replace standard units.
Efficient Products	ENERGY STAR Refrigerator	Install energy efficient Energy Star Rated refrigerator to replace standard units.
Efficient Products	ENERGY STAR Room Air Conditioner	Install energy efficient Energy Star Rated room air conditioner to replace standard units.
Efficient Products	Water Heater Blanket	Install water heater blanket on electric water heater to reduce heat loss from tank.
Efficient Products	Variable Spd Pool Pump	Install high efficiency variable speed pool pump to replace single speed pool pumps.
Existing Homes and Audit Direct Install	DTR_ ≥14% Reduction leakage (All electric)	Duct testing and repair netting a minimum of 14% reduction in leakage on electric heat pumps. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	DTR_ ≥14% Reduction leakage (Dual fuel)	Duct testing and repair netting a minimum of 14% reduction in leakage on air conditioners. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	DTR_ ≥50% Reduction leakage (All electric)	Duct testing and repair netting a minimum of 50% reduction in leakage on electric heat pumps. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	DTR_ ≥50% Reduction leakage (Dual fuel)	Duct testing and repair netting a minimum of 50% reduction in leakage on air conditioners. Since air conditioners only use electricity for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥14% Reduction leakage (All electric)	Early retirement of an old inefficient heat pump combined with duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥14%	Early retirement of an old inefficient air conditioner combined with duct testing and repair netting



	Reduction leakage (Dual fuel)	a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥50% Reduction leakage (All electric)	Early retirement of an old inefficient heat pump combined with duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	Early retirement of an old inefficient air conditioner combined with duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC with QI (All electric)	Early retirement of an old inefficient heat pump combined with quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	ER HVAC with QI (Dual fuel)	Early retirement of an old inefficient air conditioner combined with quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since air conditioners use electricity for only cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥14% Reduction leakage (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 14% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥50% Reduction leakage (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to duct testing and repair netting a minimum of 50% reduction in leakage and quality installation to verify charge and air-flow of the new installation. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	HVAC/QI (All electric)	Replacement of an old inefficient heat pump when it burns out with a high efficiency heat pump is required however no energy savings is counted for the new equipment. Energy savings is limited



		to quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since heat pumps use electricity for both heating and cooling the total energy savings is higher for this equipment option.
Existing Homes and Audit Direct Install	HVAC/QI (Dual fuel)	Replacement of an old inefficient air conditioner when it burns out with a high efficiency air conditioner is required however no energy savings is counted for the new equipment. Energy savings is limited to quality installation. The definition of quality installation has been expanded to include a defined list of duct repair plus proper charge and air-flow. Duct repairs are inspected to make sure the prescriptive savings will occur. Since air conditioners use electricity only for cooling the total energy savings is lower for this equipment option.
Existing Homes and Audit Direct Install	Screw in CFL - Direct Install from Audit	Installation of up to ten 13 Watt CFLs to replace standard incandescent lamps during an energy assessment of a customer energy bill.
Existing Homes and Audit Direct Install	Behavioral changes resulting from Energy Assessments	Energy savings resulting from an improvement in usage patterns, maintenance or replacement with more efficient options for electric appliances after education is provided to the customer.
Generation and Facilities Improvement	Generation and Facilities Improvement	The utility chooses to pay a higher cost to install more efficient generation equipment or more efficient facilities improvements in its own facilities.
Home Energy Reports	Home Energy Reports	Delivery of reports comparing a customer's energy use to neighbors to show how they compare. This program also provided a set of low or no cost steps the customer could consider to reduce energy consumption. This program is not cost-effective through the original delivery channel.
Low Income Weatherization	Low Income Weatherization	Installation of various energy efficiency envelope, lighting and equipment options in low-income homes.
Multi-Family	ES Integral CFL	Installation of CFLs to replace incandescent lamps in apartments.
Multi-Family	Low Flow Showerheads - Electric WH only	Installation of low flow showerheads in apartments (electric water heating only)
Multi-Family	Faucet Aerators - Electric WH only	Installation of low flow faucet aerators in apartments (electric water heating only)
Res. New Construction	ENERGY Smart Homes (All Electric)	New construction standards that meet or exceed Energy Star v-3 standards. Homes must be tested with a HERS 65 or lower to qualify. Homes with heat pumps show higher energy savings because heat pumps use electric for both heating and cooling.
Res. New Construction	ENERGY Smart Homes (Dual Fuel)	New construction standards that meet or exceed Energy Star v-3 standards. Homes must be tested with a HERS 65 or lower to qualify. Homes with air conditioners show lower energy savings because air conditioners use electric only for cooling.
Res. New Construction	ENERGY Smart Homes - Tier 2 (All Electric)	Tier 2 disallowed by Decision No. 71638 (4/14/10)
Res. New Construction	ENERGY Smart Homes - Tier 2 (Dual Fuel)	Tier 2 disallowed by Decision No. 71638 (4/14/10)
Res. New Construction	ENERGY Smart Homes - Tier 3	Tier 3 disallowed by Decision No. 71638 (4/14/10)
Residential Direct Load Control - Pilot	Direct Load Control for Residential	Pilot program ended in 2013.
Residential Direct Load Control - Pilot	Direct Load Control for Small Commercial	Pilot program ended in 2013.
Retro-Commissioning	Retro-Commissioning	Contracting with an energy service provider to modify schedules and repair equipment to bring it back to 'like new' condition.

Schools Facilities	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in schools.
Schools Facilities	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in schools.
Schools Facilities	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in schools.
Schools Facilities	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in schools.
Schools Facilities	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with occupancy sensor control.
Schools Facilities	Advanced Power Strips - Load Sensor	Advanced Power Strips with timer control.
Schools Facilities	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued.
Schools Facilities	Beverage Ctrl's ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
Schools Facilities	Custom Measures	EE measures chosen by a customer and contractor to reduce energy in a commercial facility that are not prescriptive measures. Each project includes detailed cost-effectiveness test (SCT) that must exceed 1.0.
Schools Facilities	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.
Schools Facilities	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Schools Facilities	Energy efficient exit signs	Installation of CFL, LED or Electroluminescent exit signs.
Schools Facilities	Hard Wire CFL	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Schools Facilities	HIDs to T8/T5 - Exterior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
Schools Facilities	HIDs to T8/T5 - Interior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.
Schools Facilities	Induction Lighting	High Efficiency Lighting retro-fit for hard to reach areas where long life is desirable.
Schools Facilities	Integral Screw In CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
Schools Facilities	LED Indoor Lights	Installation of LED to replace incandescent or fluorescent lamps.
Schools Facilities	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
Schools Facilities	Outdoor CFL	Installation of CFLs in outdoor applications
Schools Facilities	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
Schools Facilities	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day.
Schools Facilities	Reach-in Cooler Controls ("vending miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
Schools Facilities	Reduced LPD	Reducing the lighting power density - similar to delamping.

Schools Facilities	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
Schools Facilities	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
Schools Facilities	Snack Ctrl's ("Vending Miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
Schools Facilities	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
Schools Facilities	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. Discontinued.
Schools Facilities	Variable Speed Drives	Installing variable speed drives to reduce speed and energy use for motors.
Schools Facilities	Window Films	Install window film to reduce heat entering glass from direct sunlight
Shade Tree	Shade Tree	Installing low-water use desert adapted shade trees in specified locations to shade roof and walls in residential buildings.
Small Business Direct Install	14 SEER Packaged and Split AC's	14 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	14 SEER Packaged and Split HP's	14 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	15 SEER Packaged and Split AC's	15 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	15 SEER Packaged and Split HP's	15 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	16 SEER Packaged and Split AC's	16 SEER packaged and split system air conditioners installed in small businesses.
Small Business Direct Install	16 SEER Packaged and Split HP's	16 SEER packaged and split system heat pumps installed in small businesses.
Small Business Direct Install	Advanced Power Strips - Occupancy Sensors	Advanced Power Strips with occupancy sensor control. Discontinued.
Small Business Direct Install	Advanced Power Strips - Timer Plug Strip	Advanced Power Strips with timer control.
Small Business Direct Install	Advanced Power Strips - Load Sensor	Advanced Power Strips with load sensor control.
Small Business Direct Install	Anti sweat heater controls	Anti Sweat heater controls cycle door heaters on and off to control condensation rather than having door heaters on all the time.
Small Business Direct Install	Beverage Ctrl's ("vending miser")	Controls that cycle compressors and lights off and on in cold beverage vending machines based on occupancy or minimum operating requirements for compressor.
Small Business Direct Install	Daylighting controls	Controls on lighting systems to reduce use of artificial lighting when daylight can be used.
Small Business Direct Install	Delamping	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps. This is a good measure because there is very little cost but savings are high.
Small Business Direct Install	Energy efficient exit signs	Installation of CFL, LED or Electroluminescent exit signs.
Small Business Direct Install	Evaporative fan controls	Installing controls on evaporative fans in refrigerated cases to limit operation based on need.
Small Business Direct Install	Hard Wire CFL	Reducing the total number of lamps used in a facility by installing fewer high-efficiency lamps.
Small Business Direct Install	HIDs to T8/T5 - Exterior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from Interior installations due to hours of use.
Small Business Direct Install	HIDs to T8/T5 - Interior	Replacing High Intensity Discharge lamps (High Pressure Sodium, Metal Halide) with high Efficiency T8 or T5 fluorescent lamps in exterior applications. This is separate from exterior installations due to hours of use.

Small Business Direct Install	High Efficiency Evaporator Fan Motors (ECM)	Installation of high efficiency electronically communicated motors
Small Business Direct Install	High Efficiency Evaporator Fan Motors (PSC)	Installation of high efficiency permanent split capacitor motors.
Small Business Direct Install	Induction Lighting	High Efficiency Lighting retro-fit for hard to reach areas where long life is desirable.
Small Business Direct Install	Integral Screw In CFL	High Efficiency Lighting retrofit to replace incandescent lamps.
Small Business Direct Install	LED Channel Signs	Installation of LED Channel signs to replace incandescent or fluorescent lamps
Small Business Direct Install	LED Indoor Lights	Installation of LED to replace incandescent or fluorescent lamps.
Small Business Direct Install	Night Covers	Installation of covers over open refrigerated cases at night to maintain temperature in case. Discontinued.
Small Business Direct Install	Occupancy sensors	Installation of occupancy sensors on lights to turn lamps off during unoccupied times.
Small Business Direct Install	Outdoor CFL	Installation of CFLs in outdoor applications.
Small Business Direct Install	Premium T8 Lighting	One of many T-8 lighting options to replace standard T-12 lighting systems.
Small Business Direct Install	Programmable Thermostats	Install thermostats that can be pre-programmed for temperature variations at specific times of the day.
Small Business Direct Install	Reach-in Cooler Controls ("vending miser")	Installing controls to limit use of lighting in reach-in refrigerated vending machines.
Small Business Direct Install	Reduced LPD	Reducing the lighting power density - similar to delamping.
Small Business Direct Install	Refrigerated Display Automatic Door Closers	Installing automatic door closers on refrigerated display case doors.
Small Business Direct Install	Refrigerated Display Gaskets	Installing new gaskets on refrigerated display case doors.
Small Business Direct Install	Screw in cold cathode CFL	Installing screw-in cold cathode CFLs to replace incandescent lamps
Small Business Direct Install	Shade Screens	Installing shade screens on windows to reduce heat from direct sunlight.
Small Business Direct Install	Snack Cutls ("vending miser")	Installing controls to limit use of lighting in non-refrigerated vending machines.
Small Business Direct Install	Standard T8 Lighting	Replacing T-12 lamps with T-8 lamps.
Small Business Direct Install	Strip Curtains	Installing strip curtains to doors in walk-in refrigerators and freezers
Small Business Direct Install	T8 to T8	Replacing standard T-8 lamps with premium T-8 lamps. Discontinued.
Small Business Direct Install	Variable Speed Drives	Installing variable speed drives to reduce speed and energy use for motors.
Small Business Direct Install	Window Films	Install window film to reduce heat entering glass from direct sunlight

Program Name on 2014 Design Toc Measure	Benefit-Cost Ratios, Existing Measures	Staffs B/C	Original Decision to App	Date of Approval
Appendix 3. Approving Decisions and Benefit-Cost Ratios, Existing Measures				
Program Name on 2014 Design Toc Measure	Name on 2014 Design Tool (REVISED 2014-07-15)			
C&I Comprehensive Program	15 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	15 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	16 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	16 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	17 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	17 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	18 SEER Packaged and Split AC's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	18 SEER Packaged and Split HP's	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	Air Cooled Chillers < 150 tons		1.17 No. 70403	39632
C&I Comprehensive Program	Air Cooled Chillers > 150 tons		1.17 No. 70403	39632
C&I Comprehensive Program	Anti sweat heater controls		2.8 No. 70403	39632
C&I Comprehensive Program	Beverage Ctrls ("vending miser")		2.28 No. 70403	39632
C&I Comprehensive Program	EER Rated Packaged AC (5.4 - 11.25 tons, 11.36 EER)	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	EER Rated Packaged HP (< 5 tons, 11.36 EER)	Approved as Pilot with requirement for updated cost	No. 71836	39632
C&I Comprehensive Program	EER Rated Packaged HP (> 20 tons, 11.11 EER)	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	EER Rated Packaged HP (11.25 - 20 tons, 11.02 EER)	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	EER Rated Packaged HP (5.4 - 11.25 tons, 11.31 EER)	Approved as Pilot with requirement for updated cost	No. 70403 & 71836	39632
C&I Comprehensive Program	Energy efficient exit signs		1.82 No. 70403	39632
C&I Comprehensive Program	Energy efficient ODP motors		1.33 No. 70403	39632
C&I Comprehensive Program	Energy Efficient TEFC Motors		0.98 No. 70403	39632
C&I Comprehensive Program	HIDs to T8/T5 - Exterior		1.77 No. 70403	39632
C&I Comprehensive Program	HIDs to T8/T5 - Interior		1.77 No. 70403	39632
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (PSC)		5.55 No. 70403	39632
C&I Comprehensive Program	High Efficiency Evaporator Fan Motors (ECM)		5.55 No. 70403	39632
C&I Comprehensive Program	High Efficiency Ice Makers		1.74 No. 70403	39632
C&I Comprehensive Program	High Efficiency Reach-in Refrigerators and Freezers		1.51 No. 70403	39632
C&I Comprehensive Program	Integral Screw In CFL		3.71 No. 70403	39632
C&I Comprehensive Program	Hard Wire CFL		3.71 No. 70403	39632
C&I Comprehensive Program	Night Covers		2.52 No. 70403	39632
C&I Comprehensive Program	Occupancy sensors		4.26 No. 70403	39632
C&I Comprehensive Program	Outdoor CFL		4.11 No. 70403	39632
C&I Comprehensive Program	Premium T8 Lighting		1.77 No. 70403	39632
C&I Comprehensive Program	Programmable Thermostats		9.84 No. 70403	39632
C&I Comprehensive Program	Screw in cold cathode CFL		1.37 No. 70403	39632
C&I Comprehensive Program	Snack Ctrls ("vending miser")		2.28 No. 70403	39632
C&I Comprehensive Program	Reach-In Cooler Controls ("Cool miser")		2.28 No. 70403	39632
C&I Comprehensive Program	Standard T8 Lighting		1.77 No. 70403	39632
C&I Comprehensive Program	Strip Curtains		2.52 No. 70403	39632
C&I Comprehensive Program	T8 to T8			
C&I Comprehensive Program	Variable Speed Drives		2.78 No. 70403	39632

C&I Comprehensive Program	Variable Speed Screw Compressor	1.59 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal < 150 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal > 300 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Centrifugal 151 - 299 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Reciprocating All Sizes	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Screw < 150 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Screw > 300 tons	1.62 No. 70403	39632
C&I Comprehensive Program	Water Cooled Chillers - Screw 151 - 299 tons	1.62 No. 70403	39632
Commercial Direct Load Control	Direct Load Control for Large Commercial	2.47 No. 71787	40371
Commercial New Construction	Design Assistance Incentives to Design teams	1.18 No. 70459	39666
Commercial New Construction	Performance Rebates	1.18 No. 70459	39666
Efficient Products	ES Integral CFL	1.6 No. 70383	39612
Existing Homes and Audit Direct In: Air Sealing (All electric)	Existing Homes and Audit Direct In: Air Sealing (All electric)	0.99 No. 72028	40522
Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (All electric)	Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (All electric)	1.09 No. 72028	40522
Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (Dual fuel)	Existing Homes and Audit Direct In: Air Sealing & Attic Insulation (Dual fuel)	1.09 No. 72028	40522
Existing Homes and Audit Direct In: Shade Screens	Existing Homes and Audit Direct In: Shade Screens	0.89 No. 72029	40523
Existing Homes and Audit Direct In: DTR_≥14% Reduction leakage (All electric)	Existing Homes and Audit Direct In: DTR_≥14% Reduction leakage (All electric)	0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR_≥14% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: DTR_≥14% Reduction leakage (Dual fuel)	0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR_≥50% Reduction leakage (All electric)	Existing Homes and Audit Direct In: DTR_≥50% Reduction leakage (All electric)	0.95 No. 72028	40522
Existing Homes and Audit Direct In: DTR_≥50% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: DTR_≥50% Reduction leakage (Dual fuel)	0.95 No. 72028	40522
Existing Homes and Audit Direct In: Duct Sealing (Prescriptive)	Existing Homes and Audit Direct In: Duct Sealing (Prescriptive)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (All electric)	Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (All electric)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (All electric)	Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (All electric)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: ER HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC with QI (All electric)	Existing Homes and Audit Direct In: ER HVAC with QI (All electric)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: ER HVAC with QI (Dual fuel)	Existing Homes and Audit Direct In: ER HVAC with QI (Dual fuel)	1.27 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (All electric)	Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (All electric)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: HVAC_QI_DTR ≥14% Reduction leakage (Dual fuel)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (All electric)	Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (All electric)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	Existing Homes and Audit Direct In: HVAC_QI_DTR ≥50% Reduction leakage (Dual fuel)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC/QI (All electric)	Existing Homes and Audit Direct In: HVAC/QI (All electric)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: HVAC/QI (Dual fuel)	Existing Homes and Audit Direct In: HVAC/QI (Dual fuel)	1.07 No. 72028	40522
Existing Homes and Audit Direct In: Screw in CFL - Direct Install from Audit	Existing Homes and Audit Direct In: Screw in CFL - Direct Install from Audit	1.06 No. 72063	40549
Existing Homes and Audit Direct In: Behavioral changes resulting from Energy Assessments	Existing Homes and Audit Direct In: Behavioral changes resulting from Energy Assessments	1.07 No. 72063	40549
Home Energy Reports	Home Energy Reports	1.47 No. 72254	40640
Low Income Weatherization	Low Income Weatherization	0.97 No. 70456	39666
Res. New Construction	ENERGY Smart Homes (All Electric)	1.15 No. 71638	40282
Res. New Construction	ENERGY Smart Homes (Dual Fuel)	1.15 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 2 (All Electric)	0.075 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 2 (Dual Fuel)	0.075 No. 71638	40282
Res. New Construction	ENERGY Smart Homes - Tier 3	0.075 No. 71638	40282
Residential Direct Load Control - PII	Residential Direct Load Control for Residential	1.39 No. 71846	40415
Residential Direct Load Control - PII	Residential Direct Load Control for Small Commercial	1.3 No. 71846	40415
Shade Tree	Shade Tree	3.14 No. 70455	39666

Small Business Direct Install	14 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	14 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	15 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	15 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	16 SEER Packaged and Split AC's	0.97 No. 70457	39666
Small Business Direct Install	16 SEER Packaged and Split HP's	0.96 No. 70457	39666
Small Business Direct Install	Anti sweat heater controls	1.46 No. 70457	39666
Small Business Direct Install	Delamping	2.13 No. 70457	39666
Small Business Direct Install	Energy efficient exit signs	1.42 No. 70457	39666
Small Business Direct Install	Evaporative fan controls	2.76 No. 70457	39666
Small Business Direct Install	High Efficiency Evaporator Fan Motors (ECM)	3.62 No. 70457	39666
Small Business Direct Install	High Efficiency Evaporator Fan Motors (PSC)	3.62 No. 70457	39666
Small Business Direct Install	Integral Screw In CFL	1.04 No. 70457	39666
Small Business Direct Install	Occupancy sensors	4.3 No. 70457	39666
Small Business Direct Install	Premium T8 Lighting	1.53 No. 70457	39666
Small Business Direct Install	Programmable Thermostats	3.52 No. 70457	39666
Small Business Direct Install	Screw in cold cathode CFL	1.37 No. 70457	39666
Small Business Direct Install	Standard T8 Lighting	1.53 No. 70457	39666

Decision No. \_\_\_\_\_